177 when, also after 1870, Yokuts performers came to Mono villages to present the aberrant spectacles for entertainment. Before 1870, but probably not before 1850, a diffusion of some aspects of the above-mentioned Yokuts ceremonies may have been started by Western Mono individuals, shamans particularly, who, only as individuals, acquired for their own repertoires certain functions such as the handling of rattlesnakes, the taking or administering of jimsonweed, or the exhibition of power by making and propelling airshot.

171 613 619 621 177 More fundamental and undoubtedly predating the Yokuts-Mono junction unwittingly effected by the whites, is the social organization common to both cultures. This includes (1) the basic patrilineal lineages (with their totemic animal symbols) which lived either in tiny hamlets or larger villages depending on locale, under a chief and his henchman whose offices were determined primarily by inheritance, secondarily by popular choice; and (2) the further grouping of these communities into a self-conscious "tribe" having a name (Wobonuch, Waksachi, etc.) and dialectic distinctions.[2] With these named, dialectically distinct social groups or tribes is linked the concept of a "home spot" which is a Miwok feature also, as is the moiety concept shared by some but not all Yokuts and Western Mono. In other words, the historical relation of Yokuts and Western Mono social characteristics is embedded in the larger history of social organization in the entire southern half of California.[3]

171 613 177 Stemming from the totemic lineage is the practice of redeeming the totem animal by purchase and the totem-function bond--Eagle or Cougar as chief, Dove or Roadrunner as messenger, Bear dancing and Coyote clowning, features shared by Western Mono and Yokuts.

171 778 177 Another basic similarity between the upland Monachi culture and that of their valley neighbors lies in the realm of supernatural beliefs and powers. The attitudes toward supernatural power, the method of obtaining it, and the uses to which it was put are identical. However, the Western Mono shamans did not go in for specialization as did the Yokuts, with their individual powers for controlling weather, rattlesnakes, and water creatures.

177 439 On the side of material culture a more even exchange has taken place since trade relations have always, apparently, been maintained for mutual benefit, with Western Mono serving as middlemen when the Eastern Mono (Owens Valley Paiute) did not want to risk entry into Yokuts territory. However, a few items are

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[2] Now summarized in Gayton, Yokuts and Western Mono Social Organization.

[3] See Kroeber, Shoshonean Dialects of California, 114-122; cf. Steward, Basin-Plateau Aboriginal Sociopolitical Groups, 50-57, and fig. 7 showing Owens Valley Paiute (Eastern Mono) band areas.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29

177 known to have been recently adopted by the Yokuts from their Mono neighbors, i.e., the
439 triangular winnowing tray and the picturesque hooded twined cradle which are now made by Yokuts women instead of being bought from the Monachi. And, though it is yet to be proved, [174] I believe that the pottery-making of the Yokuts foothills is a craft derived from the Western Mono, linking with the Southern Basin Shoshoneans and the Navajo rather than with the pottery-makers of Southern California.[2]

177 Western Mono have adopted Yokuts houses and have made one innovation, at least, in [342] adapting a thatch covering to the two-post oval frame (Waksachi).

In the realm of mythology the Western Mono have accepted many Yokuts myths, yet share with their linguistic relatives of the Basin tales not told by the Yokuts.[3]

178 Today many Yokuts are on the Tule River Reservation; a few families have been permitted
171 to live almost undisturbed on the large ranches of white landowners along the foothills. Some Yokuts and Western Mono have small claims of their own on which they dwell as poor ranchers or woodsmen. Little of the aboriginal life shows in this existence, save for the continued use of acorn foods and the few implements needed for their preparation, and basketmaking, an art which flourishes because of tourist trade. Some mothers still confine their infants in the hooded cradle. Native language and kinship terms are in use; family totems are retained, and official functions are aberrantly performed on rare occasions. Otherwise the life of Yokuts and Monachi is scarcely distinguishable from that of poor white farmers and laborers in the San Joaquin Valley and Sierra Nevada foothills.

133 Before entering upon the ethnography which follows, the reader should be familiarized with the geographic aspect of the San Joaquin Valley in aboriginal times. Naturally enough, the environment of the upper and lower foothills has changed but little, whereas the great valley floor was unbelievably different in the past from the completely dry, hard plain it is today. There is no better way to present the picture of the past than to permit eyewitnesses to speak for themselves. There were many travelers in the area who left records of their experiences with the troublesome mire of the tule swamps and of their awe-struck admiration for the scenery of the Sierra Nevada; but no account so well fits our purpose as that of Lieutenant George H. Derby, who in May, 1850, made a circuit of the valley for military re-

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[2] Cf. Tschopik, Navaho Pottery Making, 70 ff.; Hill, Navajo Pottery Manufacture, 16, as regards pit-firing in the west Navajo area.

[3] Gayton, Areal Affiliations of California Folktales, 595.

[4] E.g., Estudillo, Frémont, Carson, Bunnell, Bidwell, and others.

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29

[p. 76]

INTERTRIBAL RELATIONS

101 184 The tribes living in the swampy territory around the Tulare Lake were the nucleus of a Yokuts culture which differed in many respects from that of the foothill and hill people. The divergence was not merely that due to a fundamentally different ecological background; it was manifest also in their dichotomous social organization and ceremonial practices. The lake tribes' cultural link was with the Yokuts of Kings River and northward, and with the Wowol to the south rather than toward the eastward hills.

115 The localities and intertribal relations of the lake tribes are presented by Kroeber,[23] and to his information we have little to add. Our Tachi informant (M.G.), long away from childhood scenes, was unable to formulate precise information on her native village region. The need for two interpreters to translate her conversation (Tachi to Wukchumni, Wukchumni to English) did not add clarity. The Chunut informant (J.A.) excellent in other respects, was unclear on local topography, whereas her knowledge of names and locations of distant tribes was remarkably accurate. The information obtained from these two women has been added to that of Kroeber and mapped in Local Map A (map 2).

578 609 According to M.G. there was no intercamp or intervillage quarrelling among the Tachi. But bitter feeling, resulting in occasional fights, existed between the Tachi and the valley tribes living north of Kings River, known collectively to the Tachi as Hoshima (ho´šima, northerners). The Nutunutu, as the nearest of these, were specific enemies of the Tachi. If these people attempted to come into Tachi territory for seeds or game, the Tachi "met them halfway and made them go back." The Chunut did not fight the Hoshima, M.G. said (but see Chunut informant's account, p. 9).

● 439 436 The Tachi were on friendly terms with all the groups bordering on the lake, but particularly with the Wowol who came as far north as the Wolasi in their balsas to trade. They tied the balsas to tules and slept on them at night. The Wowol wanted a grass-seed food and traded shell money in return. The Wowol acquired the shells from the To´kya (Salinan), who lived at ču´lama,[24] near the ocean, and far west and

[23] Handbook, 474-486.

[24] A Salinan site on Cholame Creek, an upper tributary of the Salinas River.

439 south of the mountains (the Coast Range). The
436 Tokya ate the fish from the shells and traded these to their inland neighbors. Usually the buyer made them up into money: this was what the Wowol did. The Tachi went to Wolasi villages to trade with the Wowol, but no farther south, as Yi´nɛl was the most southern Tachi village. The Tachi, Wolasi, and Chunut traded seed foods in exchange.

439 The Telamni came out to the Wolasi to
574 visit but not to trade (sic). They, the Wechihit, Wolasi, and Chunut came to Tachi mourning ceremonies at Tɛlwe´yɔt. The Gawia did not ever visit so far west.

361 The large Tachi village called Tɛlweyɔt
115 was on the edge of the lake south of the present town of Lemoore. An important chief there was Luču´ši. The informant M.G. was born there; after her marriage she moved "a little east up the river [Kings?] to a village called Gaiwo´šyu. The barren area west of Tulare Lake which extended as far as the Coast Range and was roamed over by Tachi was called Utju´i. (Kroeber places a village, Udjiu, in this area.) There was a pond near Loston Hills.

578 The Chunut informant, J.A., gives a differ-
361 ent picture of Tachi relations, but her less intimate view of the situation makes it seem unreliable. She states that the Tachi, Wowol, and Chunut fought frequently, with the Tachi and Nutunutu as allies against the combined Chunut and Wowol. Tɛlweyɔt, a Tachi village, was at Summit Lake. At Woko´n were a series of camps among which the Tachi moved, especially when one camp had been visited by death. J.A. named Hono´tan (to stop suddenly) and či´yi (bones) as two important Nutunutu villages, both near Kingston. Čiyi is undoubtedly Kroeber's Chisu. A chief there was Oli´kɔs, nicknamed Nai'nai´'i'ɔs (Squint-eye) because he was cross-eyed. The Nutunutu was a very large tribe, J.A. said.

101 The Chunut on Tulare Lake had Tachi and
131 Nutunutu neighbors toward the north. Their land extended eastward almost to the present site of Tulare (city), east of which dwelt the Wolasi. The main Chunut rancheria, which J.A. pronounces pi´sras, a pronunciation I believe is a corruption of "Pierce's Ranch," was near Farmersville, which she claimed was Chunut territory (čunu´tači pa'an). Near Tulare (city)
101 was a bottomless pond called mike´yɔt; things
484 which fell in were never recovered. The Chunut
131 frequently walked over to the ocean across the mountains to the west, provided relations were

friendly with the intervening Tachi (and, presumably, Salinan).

Wowol territory was somewhat west and elsewhere south of the Chunut. One important village was called Yiwo´ni. An island in Tulare Lake belonged to the Wowol; it was called witi'tsolo´wɑn. On it was a village which J.A. and her mother visited by means of balsas. They had a relative there. On the island was a tremendous number of bleaching bones which J.A. says were those of humans who had died of smallpox.[35] The visit was probably made between 1860 and 1870; it was "before the big earthquake."

South of Bakersfield lived people who "had a lake in the middle of their mountain. It dried in the summer." (This may be Castac Lake, possibly a small lake near present Tehachapi.) This tribe was called tipe´kɑl yoko´č (red clay people) "because they lived in houses plastered with red clay, with tule roofs which were covered with mud." The people who live there now are called Tejon (whether this was Fort Tejon or Tejon Ranch some distance to the east, J.A. could not determine; probably the former, which is near Castac Lake).

The Tokya (Chumash and Salinan) lived "on the coast"; the Salinan of Chulame were called Tokya also. Various types of shell money were got from them. J.A. had not heard of Mutulu (a coast Indian raider mentioned by Wobonuch informants) or other individuals from the coast, and believed that the valley people went out to do their trading rather than that coast people came in. She, too, says that the bought shells were worked into money by the Yokuts purchasers.

At Ventura lived the Itituwɑt, but J.A. does not know whether this was the Yokuts name for these people, or what they called themselves.

The Kawe´sa (Kawaiisu) lived east of Tejon, toward the hills "and talked something like the Monachi." They were noted for their large bows and arrows.

The Ričiki´tu (Pitanisha) lived at Whiskey Flat "over back of Kern River." At another time J.A. said Ričikitu was "the Mexican name for the Pitani´sa who lived at Pita´nɑn, where there was a deep little river."

Localities

The following sites are located on Local Map A (map 2). Places known to be villages are marked with a dot and circle.

1. mu´sahau: a Wechihit village
2. wewa´yo: a Wechihit village
3. wo´hui

[35] Powers mentions a "plague" which took many lives in the Fresno River region a few years before his visit (Tribes of California, 380).

302 could paint his face any way he liked if he did not want to follow a totemic pattern. After ceremonial washing a man's face was covered with red paint; sometimes a little white paint was put on a woman.

The following information is from Mr. E.W. Gifford, who kindly put his data on Tachi moieties at my disposal.

302 The Tachi employed moiety face paints. The
616 toxelyuwic painted a "pink" stripe of wild rose-
bush powder[48] from the edge of the hair on the
forehead down to the tip of the nose, and a
[824] horizontal stripe under each eye. A small
black spot was added under each horizontal
stripe of pink.

The nutuwuts moiety painted the right side of the face solid white, the left solid black. No spots were added.

It seems probable that the informant who gave these data described patterns characteristic of some animal (lineage totem) associated with each moiety. There is no suggestion of specific moiety patterns from any informants of
[613] moiety-divided tribes. The lineage is the essential unit; but if forced to characterize moieties, an informant will choose some important animal (lineage totem) of each, most frequently Coyote and Eagle. Without further detail being given, it would appear that all persons of one moiety or the other had these animals as totems. I believe it is thus with the two paint patterns described to Gifford: that the informant oversimplified.

Money Manufacture

436 The shells for money were obtained whole
321 from the Tokya (Chumash, Salinan, or other
coastal people to the west). By laying them on
[439] a rock and giving them a sharp blow with a
stone held in the hand, they were broken up
into several parts, which were again cracked
into smaller pieces by the same method. Each
piece was given a circular shape by rubbing
down its edge on a large, flat, hard rock. The
[412] discs were then drilled by means of a drill
(wa´lai) of bone which was imbedded in the end
of a button willow stick. The palm of the left
[237] hand,[49] gummed with fish glue, rolled the drill
on the left thigh while the right hand pressed
the disc against the rotating tip.

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[48]Concerning the possible derivation of this powder Professor N.L. Gardner, of the University of California, writes me [Gifford]: "There is a fungus growing on certain species of roses which causes distortions in the branches of the rose, such distortions being filled with masses of orange colored spores. It is barely possible that these might make a temporary pigment."

[49]Practices with the left and right hands are uncertain with this informant, who is herself left-handed.

[P. 569] Wukchumni Western Mono NS25

Y 101 although their main village was Yeitao (Local Map B, nos. 5, 2, and 1). They had another 131 village near the modern hamlet of Klink. They would come onto Wukchumni land to gather berries and redbud. There is evidence from historic accounts that the Gawia were once a powerful tribe. The Yokod came no farther Y north than Lindcove.

438 The Waksachi lived in Eshom Valley and claimed territory as far west as Aukland, according to M.L. They also came down to the edge of the plains in Wukchumni territory to gather seeds and trade (see Waksachi account, Pt. II). On the other hand, the Wukchumni went up to Eshom Valley for the specially fine acorns of the black oak.

Y To the east the Wukchumni went into Pat- [223 wisha territory, above Three Rivers, to snare ● 439] wild pigeons. They took tule house mats with them to make shelters, then sold them to the Patwisha, who lacked tule.

Y [222] The Wukchumni went onto Chunut land to the southwest, where magnificent groves of oak abounded, to get acorns when there was a shortage in their own area. No payments were made for these friendly forays among any of the above-mentioned tribes.

439 The Tachi from the lake bought burden baskets, coiled baskets, and pottery vessels 437 from the Wukchumni, for all their containers were made of twined tule in aboriginal times (according to M.L. and M.G.). They in turn made the finest of tule mats which they sold to the Wukchumni and others of the foothills. The Tachi and others of the lake tribes were the manufacturers of shell money; they bought the raw materials, unworked shells, from the coast tribes. Thus the movement of money was eastward, of commodities westward.

Y M 177 [191] Very little that is definite can be learned of the Patwisha, the Western Mono tribe to the east of the Wukchumni. The informant J.P. was half Patwisha in his maternal line. He was born and raised at Hotnunyu, a village where people of Yokuts and Western Mono blood mixed and were bilingual in speech. The Pat- M [105] wisha had the Bear Dance, Shamans' Contest, a village organization with chiefs and winatums, and entered into all ceremonial affairs with the Yokuts tribes, as did the Waksachi. The general impression from J.P. and other informants was that the Patwisha were a small group of Western Mono on the way to complete absorption by their more numerous and culturally richer Yokuts neighbors and that they disappeared entirely during the flux and pressure of white encroachment.

Y 439 The Eastern Mono, called Mona ʻi by the 648 Wukchumni, were well known to them as traders. In the late summer, when the mountain passes were open, they came over bringing sinew-backed bows, moccasins, rock salt, pine nuts (waʻtat), jerked deer meat, and pine wood "hot-rock lifters," to sell. They wanted money and fine

439 Yokuts baskets in exchange. There was an under-
648 current of hostility between the Monachi and the Yokuts and these traders were often accompanied by Waksachi or Patwisha as an assurance of cordial reception. They never went farther west than to the Gawia and Yokod, and four days to a week would be the extent of their stay. Women as well as men came on these trading trips, and occasionally one would stay the winter, acquire a man if she could, but return to the eastern side of the mountains the following year.[139] The Wukchumni and other foothill Yokuts did not go across the Sierra Nevada to trade. After the intrusion of white settlers the eastern side of the mountains was used as a refuge by Yokuts in flight from white persecution.

101 The Western Mono tribes northeast of the Waksachi, the Entimbich and Wobonuch, were merely called "easterners" or "uplanders" (nuta´) by the Wukchumni, while the Wechihit, Choinimni, and others on Kings River were called "northerners" (hoisa´´ima). All tribes south of the Yaudanchi, i.e., at Tule River and southward, were called "southerners" (humta´n:n).

Wukchumni Villages

124 I was not able to secure anything comparable to a census for any Wukchumni village, as only a remnant population was left even in the childhood of my informants. Certain families and persons are well remembered and repeatedly referred to by all informants. Such data as I have follow. That given by J.B. may serve as an example of all such seed-gathering expeditions.

361 There were three major Wukchumni settlements: Diapnuša, Gutsnumi, and Hoganu, in order of their respective importance (Local Map B, nos. 33, 19, and 29). The most prominent chief about 1870-1890 was Muṭo´ni,[140] who had
622 headquarters at Diapnuša, but who had a ménage at Hoganu where his son Bise´ti and daughter Wa´ohet were born and raised. One of the winatums at Diapnuša was Po´koi, J.B.'s father. When late spring (ko´toi tiša´myu) came, people thought of going to gather seeds. This would be about May after the Snake Ritual had been
221 held. The chief decided when to move; he would
166 call Pokoi and tell him to announce the moving.[141]
621 It was not necessary that all families go at exactly the same time, nor did they have to wait until the chief himself set out. But all

[186 837]

[139] While M.L. spoke scornfully of these lingerers, she denied that they were prostitutes. Casual cohabitation was a commonplace of Yokuts culture: men came and went, enjoying temporary domesticity.

[140] Consistently pronounced matsu´ti by J.B.

[141] In two myths recorded by Dr. Newman a description of this seed-gathering move serves as a prologue (cf., Gayton and Newman, 1, 89).

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529
[P 656]

291 ably it was of wildcat skin which was not split. In donning the garment, it was folded over the belt at the back, the belt being pulled tight and tied in front. As the clout hung thus at the back, the inner flap was about two-thirds the length of the outer. The outer, longer length (the clout proper, so to say) was pulled forward between the legs and forced up under the tied belt. There was sufficient length for the front end to hang in a flap of about 6 to [281] 10 inches. Wildcat skins did not allow for so long an inner length at the back, though this always had to come well under the buttocks or the clout would loosen and pull out at the back when the wearer stooped or sat. Powers states [834] that the breechclout was not removed during bathing, but none of my informants made any such claims to modesty.[159]

Men's dress.---It was not unusual for men to go entirely naked at any time. A loincloth [281] of deerskin (sep) is mentioned by Kroeber;[160] my informants spoke of its use on dress occasions but not as a daily garment.

293 The belt was of milkweed string woven
291 ("sewn") in the same manner as the burden band (fig. 13, c-f). This belt was 35 to 40 inches long, which allowed some 6 inches to hang down [301] after it was knotted. A belt for special dress had small beads (koi koi) inserted in its strands and was called koikoi´ˈǂč (fig. 13, g).
291 Today all such belts are woven on the bow loom
294 which was perhaps diffused through Spanish influence. A belt of milkweed fibre and red wool,
286 woven on the bow loom but old style in effect, was worn by a Chukchansi informant.

291 A sandal (daki´ˈǂč) of thick hide, deer neck or bearskin, was worn by men during very
294 hot weather or when making a long journey. Several layers of hide were cut to the foot
281 pattern, then slit at proper points, and binding thongs were inserted. Then the bottom or "sole" layer was added and all sewed together with sinew. Holes were punched along the edges with a fine, sharp, deer bone awl. The sewing was around the outside. Informants disagree on the position of the binding thongs.

291 Sandals were not worn by women. No type of fibre sandal was known. Powers mentions
281 sandals but does not describe them beyond saying that they were "very rude" and that elkhide was preferred. Kroeber speaks of "rude sandals of bear fur" which were used in winter. The statement by a knowledgeable pioneer that no foot covering of any sort was worn and that there was no Yokuts word for such an object is unquestionably an overstatement; yet it serves to emphasize the scarcity of footgear.[161]

[439] Moccasins were bought from the Eastern Mono. The attempts by informants to describe

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[159]Powers, 382.

[160]Handbook, 519.

[161]Powers, 375; Kroeber, Handbook, 519; Latta, Uncle Jeff's Story, 38.

their construction were all unintelligible. M.L., now blind, said that the Wukchumni and Patwisha, but not the Gawia, had a moccasin called wońka´da. It had two seams and a "piece up the front" (a tongue?). The Yaudanchi bought ready-made moccasins from the Eastern Mono. These had a seam up the toe-front and tied in front at the ankle; they were called ča´k·t (M.S. did not know their Mono name).

Men ordinarily wore the hair long and parted in the middle; they did not wear bangs. When it proved a nuisance at work, it was tied at the nape of the neck with a length of string or leather thong. Yaudanchi men, on dress occasions, tied their hair in a "club" at the nape of the neck with an eagle-down string (ča´yi); this arrangement was called a´pati. In hunting, the hair was knotted and held in place with wooden skewers.

A hair net was not used on ordinary occasions, but as a foundation for feather head ornaments with ceremonial dress. It was not used by women. Of fairly fine mesh, 1 to 2 inches to a taut loop, it was rectangular, roughly 12 to 15 inches wide and 30 to 40 inches long. There was a definite way of putting it on (fig. 7). With the hanging hair pushed into a cluster at the back of the neck, the net was laid lengthwise over the head so that the front end hung over the face to the

Fig. 7. Method of donning hair net. a, net laid on with flap over face. b, flap gripped in teeth, hair and net twisted together. c, twist wrapped around head. d, end tucked in and flap rolled back over twist.

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322 As the best instrument of this group, No. 1-3943 was selected for description. It measures 3 feet, 7-3/4 inches in over-all length and is 1-3/8 inches in width at center. The bow curvature is slight, and only one end is now recurved. The ends differ, one having a projection to carry the permanent fastening of the bowstring, the other hooked (fig. 10, c), the string being hooked and unhooked over this end. This weapon differed from the others of the group in having a hand grasp 7-1/2 inches wide of skin thong wound around the bow at the center. The wrappings were exactly parallel, touching but never overlapping. The wrapping was started by laying one end along the outside and returning the wrapping over this end. On the back about 6 inches above the grasp was [237] glued a red-headed woodpecker's scalp. It is possible that this was a hunter's talisman.

The sinew-backed bow (fig. 10, b) was doubtless made of mountain cedar [juniper] as [439] Kroeber states, as was true for the neighboring Mono from whom, in fact, most Yokuts bows were obtained.[173] The sinew used was that taken from the long back muscles of deer; it was fastened to the back of the bow with glue made of boiled deer brains. The string was of sinew (pik·t).

Kroeber states:

> The commonest type [of bow], primarily for the hunt, was nearly as long as a man, of about two fingers' width and the thickness of one. The ends were recurved, probably through a curling back of the thickened sinew. Bows made specifically for fighting were shorter, broader, and flatter, and pinched in the middle. Except for being unpainted and probably not quite so extreme in form, this type appears to have been the same as the northern California one.[174]

Powers describes Yokuts bows as he saw them.[175]

> As to their implements and weapons, there are some interesting particulars to be noted. [439] Here, as everywhere on the Sacramento and Joaquin plains, the Indians make no bows [sic--no sinew-backed bows], but purchase them all from the mountaineers. This is because they have no cedar. This wood is extremely brittle when dry, and is then the poorest possible material for bows; but by anointing it every day with deer's marrow while it is drying the Indian overcomes this quality and renders it the best. The bow is taken from the white or sap wood, the outside of the tree being also the outside of the bow. It is scraped and polished down with wonderful painstaking, so that it may bend evenly, and the ends are generally carved so as to point back slightly.

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[173] A description of making the sinew-backed bow is in the Wobonuch section, Pt. II.

[174] Handbook, 530.

[175] P. 373.

pushing motion. Willow arrows were straightened by the same method.

223 Bird hunting.--Kroeber attributes the
349 pigeon booth to the Yaudanchi and describes a similar method by which they captured eagles.[1a]

The hunter lay in a concealed hut of brush. He did not look at his quarry until it was caught, fearing that it flee his glance. Outside were placed a stuffed animal skin as bait
[237] and a live hawk as decoy. The trap was a noose fastened to a bent-over pole sprung from a trigger. Before the eagle was killed by being trod on, it was addressed: "Do not think I shall harm you. You will have a new body. Now turn your head to the north and lie flat!" Only men who knew this prayer and the necessary observances undertook to kill eagles.

223 The Wukchumni went up the Kaweah River into Patwisha territory to get wild pigeons (šo''owin). They had their own booths up
[239] there. They took with them house mats for temporary shelter, and these they sold to the Patwisha when returning.

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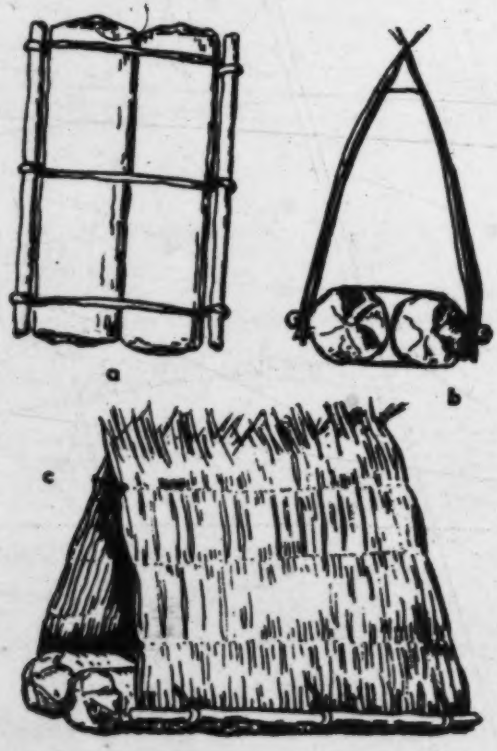

Fig. 11. Wukchumni hunting and fishing blind. a, log float. b, end view. c, sewn tule screens in place.

6. [1a]Handbook, 529, 524, pl. 45.

[P. 786] Wukchumni

Salt

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[439]

Modern "American" salt is called kuyu. In old times two kinds of salt were available. Rock salt (tus) was bought from the Monachi (Eastern Mono), who said it "came from a whole hill of salt that looked like snow." Before it was used this salt was heated on hot coals, which caused it to crumble. The other and more common salt (a´d:t) was derived from marsh grass, and was called in English "red salt" because "it looked red all over the grass."

Once M.L. and her stepmother, who was a Gawia, went over to Haditao for salt. The old women dug up the grass that grew there. She got some wood and made a fire. At sundown she put the grass on the fire which had burned down to coals. M.L. went to sleep but her stepmother stayed up until the grass was reduced to ashes. Then she lay down for a little while. She would not let the little girl look closely at the fire, nor would she herself eat anything. She worked all the next day piling up more grass. At sundown she ate a little bit but would not drink, explaining that if she ate much or drank water there would be nothing in the fire when she finished. When the ashes were brushed away there were lumps of salt in the bottom of the fire. The old woman lifted these out and freed them from the ashes by shaking them in an open-twined basket.

In 1925 M.L. had some grass-salt which she prized. It was greyish pink in color, had the texture of coarse sugar and the taste of mild vinegar.

Kroeber makes a somewhat different statement about grass-salt.[191]

> The Yaudanchi,...with other southern tribes, gathered a salty grass known as alit and beat it on stones to extract the juice; which was particularly favored with green clover.

This was a grass growing in alkaline ground which was abundant in the tular.

Woman's Household Equipment

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A Wukchumni woman's housekeeping equipment comprised one or more digging sticks, a soaproot brush, hot-rock lifters, and a "set" of baskets. The digging stick (ča´poi, lit., mountain ash) was made of manzanita, if obtainable, or of young white oak. The length varied according to the owner's preference. The tip was charred and rubbed down on rough stone which gave a heat-hardened point; the point was reworked by the same method when it became too blunt. Sometimes a woman who liked a short stick (about four feet long) would contrive a

[191] Handbook, 530.

412 nobby upper end by capping it with boiled soap-
322 root and tying over this a piece of buckskin. Weights were never added.

The soaproot brush (čine ẍ:l) varied in size from small ones some 4 inches long to large ones of 9 inches.[392] They were used variously for brushing up meal when preparing foodstuffs, or for brushing the hair. Hair-
[302] brushes were large and made of coarse fibres which have hook-like tips. One in a family was sufficient. The root to make a brush was dug after the flower had faded when the fibres around the root had reached a maximum toughness. The plant's top was torn off and the fibres carefully removed from around the bulb. The bulb was boiled in water until it became a plastic cream-colored mass. The fibres having been arranged as a brush and so tied, the bulb mass was pressed and shaped over the end as a handle and tied in place with several wrappings
[314] of string. The liquid from the bulb was viscous and was applied to burden baskets and cradles, where it dried as a practically colorless stiffener.

415 The set of rock lifters consisted of a pair of straight sticks and a looped one. The looped lifter, commonly called mushstirrer because one must necessarily stir about in the mush to find the cooking stones, was made of a peeled withelike stick, heated over coals and then bent around the foot to form a loop. The double handle thus formed was tied with a milkweed string or with a thong (see pl. 1, right verticals). Wild grapevine withes were used for a light type of lifter which was peeled, looped, and tied while still green and flexible. Two sticks from Drum Valley are made of bent young oak and, according to the collector's notes, are tied with the inner bark of oak.[393] Although these looped sticks were used to extract cooking stones from food which was being boiled, the hot stones were lifted in with a pair of pine sticks flattened out at one end. As these were often charred they were not allowed to touch the food, and hot rocks to which ashes clung were dipped in water on their
[439] way into the food. The best hot-rock lifters were of pine and were bought from the Eastern Mono, who made them for trade. A medium-sized basket (8 to 12 inches in diameter) of simple flaring type was considered a suitable payment in return.

285 The "set" of baskets comprised six types
482 essential for food-gathering, preparation, and cooking. (See figs. 2 and 3.) The large conical burden basket (a ñaš) was of split willow. It was diagonally twined, of close work, and was stiffened with soaproot liquor. Because of

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[392] Those collected by Dr. Barrett and now in the University of California Museum of Anthropology.

[393] University of California, Museum of Anthropology, nos. 1-10846, 1-10848; Dr. S.A. Barrett, collector; cf. Kroeber, Handbook, fig. 38.

854 baby and mattress were both lashed to it by means of one set of cords. The cradle frame
335 (with its permanent mat) was called a'hi·'li·č; the separate mat (mattress), even when the infant slept in it, was still called mat (ṭ·ñi, the usual word for a tule mat). Such a cradle is shown by Kroeber.[203]

If the cradle needed a hood, a broad band of tules, vertically twined about every inch, was fastened on as an addition. Apparently it was not thought of as an integral part of a normal cradle.

[177] The fan-shaped hood and lattice-twined cradle of willow are a recent introduction from the Mono. This information on cradles from M.L., Wukchumni, and M.S., Yaudanchi.)

According to M.L. and K.G. the forked-frame cradle was lathed differently for girls and boys; the boys' cradle had two crosspieces, the girls' but one. The single crosspiece arrangement permitted a bulging of the soft mat so the baby girl's buttocks would not be confined and would grow large. It is to be noted that no such arrangement is made in the recent twined-frame cradles. These, however, carry markings in accordance with the sex of the occupant, zigzag for boys and diamond for girls.

MONEY, NUMERAL SYSTEM

436 The foothill people probably never manufactured money, although the intermediate Gawia would do so when they could obtain the raw material -- unbroken clamshells. A few pieces could be made out of the freshwater oyster shells available at Woodlake and in the slough region, but the greater part of the shell was said to be "too rough." Clamshells and money came from the Chumash, Salinan, and perhaps
● [439] Costanoan peoples, passing through the hands of the intervening lake and valley tribes who in turn bought mountain and foothill products -- bows, fire and digging sticks, salt, and fine baskets. The various shell moneys were as follows: home'ṭ·n (humna, humana, pl.), a long tube (1-1/2 to 2-1/2 inches) made from the hinge of large clamshells; koikoi·č, a short tube (1/2-inch) of white, probably also a "hinge" and used in ornamental belts; moco'ko, the small disc of clamshell which, in strings, was the common currency. European beads have
[177] acquired Yokuts names: in Wukchumni, hoi'yo is a small red glass bead,[204] and tedi'diduš is a glass bead with the surface planed to represent cut facets.

436 804 435 The descriptions of the method of measuring strings of clamshell discs and the values

[203] Ibid., pl. 40, m; mattress, pl. 40, m.

[204] Called in English "pomegranate seeds" by M.P.: pomegranate trees are grown abundantly in the Visalia-Lemon Cove district.

1: Gayton E-5 (1925-1930) 1948 N529 Yokuts N529

[P. 143 b]

Choinimni

TERRITORY AND INTERTRIBAL RELATIONS

101 131 The Choinimni occupied land along Mill Creek from the junction of its north and south forks to its union with Kings River (see Local Map D). Above them on Mill Creek were the Entimbich, a mixed Yokuts and Mono tribe, and the Michahai, a basically Yokuts tribe who shared Squaw Valley with the Chukaimina Yokuts. From Sycamore Creek on Kings River, where Apa'wič was the Wobonuch frontier village, the Choinimni held both sides of Kings River as far west as Hughes Creek and perhaps a little beyond, where the Toihicha took up the north side of the river. On the south bank the Choinimni territory continued to Kipai'yu, their last village, which was fairly close to Centerville; there Aiticha land began on the south side and, on the opposite side, now somewhat west and south, were the Wechihit. This area is somewhat larger than that indicated on Kroeber's map.[1] The data for Mill Creek, I think, are wholly trustworthy: that is the locality P.D.W. knew best. His eastward extension to Sycamore Creek fits with Jeff Mayfield's statements for about 1850-1860.[2] On the west, Centerville as the eastward limit of Aiticha territory was a point on which P.D.W. was insistent; his location of Kipaiyu, however, may be incorrect, Kroeber's location being perhaps more exact. This still leaves it possible for the Choinimni to have dominated the river on the south side for some distance, that is, to about Centerville.

649 177 Prior to 1860 the social relations between the Yokuts and Western Mono were not so casually friendly, much less so intimate, as they have been in recent years since the two groups were forced into mutual contact by white domination of their country. In the 1850's 439 the Choinimni carried on trade, through a few individuals who seem to have been professional

[1] Handbook, pl. 47.

[2] Latta, Uncle Jeff's Story, 15.

[P. 143 C] Choinimni

439 barterers, with the Monachi (Wobonuch Western Mono) neighbors on Kings River above Sycamore Creek. The Yokuts considered themselves superior. 186 Unlike the Penutian-speakers of the valley, [192] the upland Monachi were found to be treacherous and thievish by the Mayfield family. However, with characteristic fairness, Mayfield said that this might be due to his family's friendliness with the Yokuts and that, had the Mayfields been placed first amongst the Monachi, these Indians probably would have been the friends and the Yokuts would have proved equally inimical.[3]

619 What is clear throughout is this: that utmost friendliness prevailed among all the 423 Yokuts tribes in contact with one another along these waterways, particularly with regard to fishing privileges. While the Choinimni felt the north bank of Kings River to be theirs, between the Wobonuch on the east and the Toihicha on the west, the Gashowu were welcome to occupy their fish camp (Map 2: Local Map D) during the spring salmon run. These neighbors remained there while the fish dried, which they then took home to store. Similarly there were the most flexible "boundaries" for seed and acorn gathering. As elsewhere along the eastern side of the San Joaquin Valley, there was an abundance of fish, game, and vegetable foods; probably for that very reason, nothing [574] was begrudged. There was much intertribal visiting during ceremonies; the Choinimni, Michahai, and Entimbich particularly combined on such occasions.

574 The Choinimni, for their part, were annual visitors in the Tulare Lake region, where they 484 were hospitably received by the Tachi. An excursion to the lake on tule balsas is described [501] by Jeff Mayfield. The visitors took with them supplies and equipment for camping. The large 574 balsas were boarded at the edge of the hills, 502 some ten miles below Sycamore Creek, where the 484 river waters were broad and placid, yet full

[text continues on p. 145]

[3] Ibid.

264 Meals were irregular, save for a late afternoon supper just before sundown. Snacks were taken by workers as they came home from tasks away from the village. Mayfield claimed all persons ate from a central basket by dipping in three fingers, but used small baskets for drinking.

227 Traps and weapons.--The fish trap was a cone-shaped net of milkweed fibre. Its round mouth gaped in a weir facing upstream; the fish were driven downstream into it. In shallow pools fish were caught by wading in and pouncing an open-bottomed basket over them; they were then extracted by putting a hand through the opening.

A double-pointed harpoon, one tip of which was detachable, is described by Mayfield; the pole handles were often 20 feet long. A scaffolding was constructed to spear the fish from: two poles, crossed like shears, were set butt down in deep water 10 to 15 feet from the bank, the crotch about level with the land. In this crotch were lashed the tips of two long poles whose ends rested on the bank and were some 10 feet apart. Across this frame were laid poles and leafy branches, amongst which the fisherman lay face down. As he could see fish in the shady water below, he speared them through an opening between the poles.

411 Mayfield, when a lad, was given a fine sinew-backed bow. This was about 3-1/2 feet long, wide, flat, with handgrip in center and recurved ends, and was "painted in pretty [283] colors." The string was of sinew, tied at one end and looped at the nocked end, which was unfastened when not in use. These bows were all [439] [463] bought from the Monachi by the Choinimni and taken back to them for repairs, in fact, to a certain skilled individual north of Sycamore Creek.

The Choinimnis' own simple bows were without recurved ends.

411 Excellent details of hunting, of the making of weapons, etc., are given by Mayfield 224 in a passage too long to reproduce here. The essential points are: arrow release with two fingers, three fingers for heavy bow; arrows with obsidian-tipped foreshaft for warfare and heavy game, hardwood foreshaft for light game; simple arrow for practice; bird-arrow tipped with four cross-pieces; foxskin quiver; the pigeon booth (see Michahai below); and the deer disguise. Deer and elk were snared, but the method is not described.

291 Clothing.--The man's breechclout was ten inches wide, cut from a full length of deerhide, held in place by a buckskin thong over which the clout was doubled at the back and over which the two front ends hung in a flap. Women wore a "rabbit skirt woven together like the blankets." This consisted of two knee-length aprons, the larger one in front. Cougar skins were worn about the shoulders in cold weather. Mayfield claims footgear was unknown.

280

482 Occasionally a basket cap was worn under the tumpline
[854] to ease the pressure, as was sometimes done when carrying a heavy child in a cradle.[11]

Musical instruments.---The elderwood flute
*534 (u´tač) had four holes. Not many men could play it; P.D.W. thought one had to dream about it to become really adept. Two Choinimni experts at Kulušao were Kudu´ma and La'hai´yi. Samson Dick (Ya´ki) is the only person living
[237] now who can play well.[12] The hawk shinbone whistle (pu´sač) was held in the mouth while the musician executed dance steps. This kind of whistling is called wušinuha´o, the term applied to ordinary (European) whistling with pursed lips. The elderwood clapper (ta´wal) was used for most ceremonial accompaniments, the cocoon rattle (sa´nač) being reserved exclusively for doctor's shamanistic dancing and for the Bear Dance.

Beating upon a hollow log is reported by Mayfield.

[202] A short musical bow, twanged upon while
[198] one end was held in the mouth, was heard by Mayfield. Whistling, he said, was used only for signaling.[13]

533 The singers who accompanied dancing were called ale´kič; the act of singing, or songs, e´lkač.

302 Paint.---White paint (ho´sot) was a clay
386 "dug up in the swamps around here" (i.e., at the edge of the foothills toward Centerville).
[439] Red paint (hu´'iyu) was got in trade from the Eastern Mono. Black paint (wa´wen) was of unknown source. All these paints were lumpy; in preparation they were ground or rubbed down on a rock, then mixed with grease and applied with the fingers. P.D.W. insists that there were no distinctive totemic paint patterns. White paint, crudely smeared, was worn on a doctor's arms and body when he was dancing.

276 Pipes.---A pipe of wood (elderwood) was called a´tsi. P.D.W.'s pipe, the typical Yokuts pipe, was about 3 inches long, about 5/16 of an inch in diameter at the base and 1/2 inch at the outer end. The hollowing for the "bowl" was about 1/4 inch in diameter, and held but a small pinch of tobacco. Only one or two puffs were taken, perhaps twice a day. A pipe of clay was called sə´kmai; these were not common.[14] The other common form, comparable to the wood pipe, was called si´k·l (cane) from the cane which was obtained for this and for arrow-making from the Aiticha; no cane grew up in the hills, said P.D.W. The cane pipe was 3-6 inches long and was often carried behind

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[11] Ibid., 23, 40.

[578] [12] This man, who was at outs with most of his neighbors at Dunlap in 1927, refused repeated requests to become an informant. Other Indians apologized for his unwillingness, although his refusals were made with the greatest tact.

[13] Latta, op. cit., 25.

[14] Mayfield claimed he had seen no clay or stone pipes of the Choinimni (ibid., 21).

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222 together to gather acorns, just as the Wukchumni (J.B.) mentioned for the seed-gathering camps in the Central Foothill region.

648
439 In spite of the somewhat inimical relations with the Monachi, or Eastern Mono, a lively trade was carried on between Yokuts and Mono to exchange the products, natural and manufactured, of the valley and mountain regions. In this trade the Western Mono (Yayanchi, Posgisa, etc.) were the middlemen. The Monachi came over as far as Auberry, bringing rabbitskin blankets (ye´gːs), moccasins, rock salt (obo´ko), red and blue paint, and pine nuts. In exchange they received acorns, willow-bark baskets, and bead money (šilːmki). The bead money the middlemen had received in payment from the foothill Yokuts, who, in turn, got it from the valley Yokuts in exchange for deer meat, oak wood (ti´hːn), and stone mortars and pestles, all of which were lacking in the lower lake and barren northern valley region.

The expeditions for trade were made by the Monachi: E.M. said "nobody from this side ever went over there." It is possible that the general direction of trade expeditions was westward -- Eastern to Western Mono, Western Mono to foothill Yokuts, foothill Yokuts to valley Yokuts,[49] and valley Yokuts to the Chumash and Salinan on the coast.

Localities

101
103 Few sites or localities could be named by
361 E.M.; these have not been mapped.

aho´lu'i: a Kechayi village on the San Joaquin River not far from Auberry

owo´mniu: a Posgisa [?] village at the edge of Table Mountain

šu´mhun: a village at the junction of Pine Gold Creek and the San Joaquin River

šanwo´ganiu: Dumna village on the San Joaquin River [the Millerton Court House stood on the spot][50]

taka´tipao: Kechayi territory or pa´'an in general

ačo´po: unlocated

kumku´mːč: "humming bird place"; not located, a saloon there where Hai'ai'ːč: got liquor

koko´hːp: Sycamore

STRUCTURES

342 Dwellings.---The houses of the Kechayi were of the hemispherical thatched type. The floor (wa´'ai) was circular, about 10 feet in diameter, and excavated for about 18 inches.

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[49] See the Choinimni trips to the Tachi in Latta, Uncle Jeff's Story, 29 ff.

[50] Although E.M. calls the village Šanwo´ganyu, the word is actually Penutianized "San Joaquin" and is applied to the river also.

535 monies took place indoors, save the inception
of a pleasure dance and a doctor's debut (see
below). If a rain spoiled an outdoor dance, the
[742] dance would, if possible, be moved into a large
dwelling. But this was only if it was purely
for entertainment. No ritual was ever held
indoors.

MISCELLANEOUS DATA

323 Pottery.---E.M. said pottery was "used by
184 people long ago." She had never seen but one
pot. This was owned by an old man (Old Dick)
near Auberry, who told her what it was. Auberry
[439] is within range of the Western Mono groups who
may have been the source of Old Dick's piece.
No one of the Kechayi used pottery, much less
made it, in E.M.'s time.

276 Tobacco.---There was no cultivation of
tobacco (po'om), but its growth was watched;
it grew best on burned ground. When beginning
[887] to turn yellow, about May, it was gathered by
old people. The leaves were washed, tied in
bundles, and allowed to sour, then dried and
pounded. The leaves and stems of "a plant with
berries" (kai'a'sni) were added and pounded
with the tobacco. The resulting powder was
moistened, shaped into round cakes, and dried.
[184] In this condition it was called šo'gən. The
fine tobacco, pulči'na, was not made by the
Kechayi or Gashowu. E.M. knew what it was but
thought "only Choinimni doctors" used it.

[787] The drinking of a tobacco and lime mixture
was customary among people wanting to induce
supernatural dreams, or those who sought good
health "by keeping their stomach clean." The
tobacco and burned shells of freshwater oysters
(ke'wi) obtained from the river were pounded
together in a small mortar, moistened, and
licked off the pestle.

501 Ferrying.---Men and women were equally good
481 swimmers and usually crossed the San Joaquin
River (or other water) by swimming. Babies or
possessions were put in a large flat-bottomed
coiled basket (ta'okač) made for ferrying. A
swimmer pushed this ahead of him with his left
hand, while he used his right arm, elbow hori-
zontal and forearm swinging downward in an arc,
to propel himself. The feet were kicked be-
hind, but there was no splashing. In the same
way a man might hold a baby or small child on
[758] his left shoulder. One or two swimmers would
push a log ahead of them on which a sick or
infirm person would ride astride. A two-log
raft was made for an invalid or corpse. E.M.
[186] added with pride that the Kechayi were all good
swimmers, whereas the Chukchansi were poor
swimmers.

516 Posture.---Posture was not observed, as at
this small reservation all people sat on chairs.
E.M., however, frequently pointed with her lips,
[209] with a slight raise of the head as she did so.

252 nuts fell out. The nuts were gathered up and carried home in burden baskets. The nuts to be
262 eaten were first parched with coals on a basket tray. Care was needed to prevent scorching. Sometimes, after being cooked, they were pounded in a mortar hole, the greasy mass then being rolled into balls and eaten as an accompaniment to acorn mush.

[222 481] According to N.W., when pine nuts were wanted men climbed the trees and twisted them off; today they cut them off with a rock [sic]. Ripe cones, probably those left beyond reach, shed their nuts on the ground. The whole cones were set on the fire to burn off the pitch. Then their "leaves" were knocked off to get out the nuts. Good nuts are brown at one end; [284 286] those black all over are "no good." The nuts were kept in sacks made of milkweed string. They were shelled as needed, eaten directly, or pounded and mashed into balls to eat with acorn mush.

● [439] This year M.W. climbed trees and got pine nuts. Sometimes these are sold to visitors at the hotel in Coarse Gold.

262 Meat.--The meats commonly eaten were gray squirrel, ground squirrel, gopher, jack- and cottontail rabbits, fox, wildcat, and deer, said J.R. Gopher snakes, but not rattlesnakes, were eaten.

Bear meat was eaten by some, but others thought bear "too human." "He lies down just like a man when he is dead, has breath like a man." Moreover, bears sometimes killed and ate men; hence, a bear, having possibly done this, was not fit to eat. This was the Chukchansi attitude.

Meat definitely not eaten was that of eagle, buzzard, chicken hawk, coyote, and dog. [181] However, J.R. said that to the south the valley Yokuts ate dog meat.[90] Elk was not eaten by Chukchansi, since it was not available, nor was buffalo (sic; antelope?).

Horse meat was eaten in the old days. Men would go to the valley. They made a gear of wood[91] which was put on a horse's nose. Then the captor would jump on its back, without saddle or blanket, and bring his prize up here. Some people kept horses to ride; others, after getting them here, shot them through the heart with an arrow to provide food.

252 Meat was roasted on coals; was never cooked in a basket. Deer meat was cut in pieces about twelve inches square. As it swelled during cooking, it was punctured with sharp sticks "to let the steam out so it won't burst."

251 Meat cut in strips was hung over a pole to dry into jerky. It was turned every two or

[90] This bears out the statement of a neighboring Kechayi, that dog meat was not eaten, while an eyewitness saw it eaten farther south (cf. Gayton, Ghost Dance of 1870, 72, and Estudillo among the Yokuts, 75).

[91] Not identified. The shrub grows around Coarse Gold, "it won't break -- is just like leather."

three days. Fish was treated the same way. Any kind of meat could be dried, said J.R., and would keep for two or three months.

Grasshoppers, a wingless type, were got in the plain of the valley. They were caught by setting a fire in a circle, driving it inward. When the grass was burned over, the grasshoppers, killed but not cooked, were collected. Taken home, they were roasted on a tray with live coals.

Angleworms were got in winter and cooked in a soapstone dish. A little water was added, "just enough to make a little gravy." Some people dried angleworms to keep for later use, a practice which J.R. and P.R. both decried.

Grubs of a small black butterfly* were also cooked in a soapstone dish with a little hot water; they were not cooked long. These were usually dried on trays in the sun and stored in sacks for later use.

Yellowjacket grubs were dug from the ground after the live insects had been smoked out. Dried weeds were stuffed in their holes, lighted, and blown upon. The holes were about two inches across, the nests some twelve inches below the surface. A number of holes indicated many nests. The grubs were cooked in ashes, then sifted from the ashes in an open-twined basket.

Salt.--Salt was not always available to the Chukchansi. Their supply came from the Paiute (probably Eastern Mono) of Nevada who came over about once a year to trade and even then did not always bring it. J.R. did not know where they obtained it. The salt was paid for either by bead money or by baskets. If the payment was a basket, this receptacle would be slightly larger than the lump of salt for which it was exchanged. The basket, however, was thought to be the more valuable because of its durability: "it holds water, lasts a long time; it may look old but it will still hold water a long time." For a piece of salt say four by six inches, not many beads were paid; roughly, it would be about 50 cents in American money.

The salt so obtained was mixed with water, "just enough to stick it together," and put on ashes to heat, left overnight. When taken out it was hard, "just like some kind of rock." When struck, it broke in little pieces. The flavor, however, was changed by the treatment: "it was kind of weak, you know, not like it was before the burning."

According to N.W., rock salt was got from the Eastern Mono who lived "the other side of Tuolumne, down Mono Lake way." They brought it from "the other side of Seventy-Seven, Basalt Meadow." They brought crystals about one-half

*These are grubs of a small black butterfly which does not come every year; there were none this year (1938) but they were plentiful in 1936. They come very early in the spring on trees where new leaves are budding. [Possibly a moth? -- A.H.G.]

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439 to three-quarters of an inch in diameter, carrying them in burden baskets. The salt was paid for in baskets or shell money. A quantity
263 of salt about as large as a pine cone would be
435 worth 50 cents in American money, in native
[804] terms, a basket about the same size (as a pine cone) or a kelan of beads (a strand the circumference of the flat hand). The Mono came over several times a year.

263 Rock salt was ground to varying degrees of fineness and eaten with meat, nuts, or seeds, but not with acorns. Rock salt to be eaten with acorns was "burned black" first. A layer of salt was covered with hot ashes, then pounded in an acorn hole and mixed with a certain "grass" that grows in or at the edges of the river. The grass and salt were mashed together then formed into balls about six inches thick. Water was added if needed to make it stick together. The grass was wrapped around the balls, making a thick covering. Several such balls were put in a hole filled with very hot ashes and left all night. In the morning the balls, from which the grass wrapping had burned, were dug out and brushed hard with a soaproot brush. A ball might be struck a blow and the pieces given to various people. Three to five balls would be made at a time, which would last an average family a whole year. [Just how this type of salt was used with acorns was not stated. -- A.H.G.]

258 The salt called 'alit' was derived from
263 salt grass which is covered with a white incrustation when growing. It was gathered by hand, spread to dry on flat rocks, then pounded in a mortar hole. Then it was winnowed from a circular winnowing tray, the grass particles wafting out and the salt grains remaining. The salt was dampened and pressed into balls, but these were not baked. The balls were broken as needed for use. This salt was eaten with clover and sour berries; if it was unobtainable, then rock salt was used.

The Chukchansi "went to the plains to scrape a sort of alkali off the ground," says Kroeber.[93]

Beverages

272 When manzanita berries are nearly ripe,
[423] women specify certain bushes as theirs, said
J.R., and no one else can take the berries from them.[94] When the berries were thoroughly ripe,
222 the ground under a bush was raked clean of all leaves and twigs, until the ground was bare. The woman took a long pole and, standing close to the bush, knocked all the berries to the ground. Then she took a flat short stick to

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[93] Handbook, 530.

[94] It is not clear whether a woman claimed the same bushes each year or specified them anew according to the crop promised by various bushes. -- A.H.G.

436 dollar:[115] The informants were uncertain about
30.1 the material, merely saying that the beads were made far off at the ocean. Later N.W. said a string of these beads, which would encircle the
[804] flat hand, was worth 50 cents. This standard measurement of beads, the circumference of the flat hand, was called kelan or k'ečan.

hakemesha: darkish red, white center, 1/4-in. long, 1/8 in. in diameter, though Emma Pumpkin said they "used to be about 3 inches long". These were said to be of "a bone naturally white inside and red outside." Thrall thought they looked like china.

lišaniu: blue, looked like glass with cut facets. Informants claimed they were "some kind of bone that lives in the ocean" and that the facets were made by being cut with obsidian.

Unnamed: black inside, brownish red out-
[323] side. Thrall thought these looked like baked clay. One was pinkish inside and speckled red outside, which the informant said happened when the bead was burned [fired clay or in cremation?]. These beads were pointed out as especially old.

A dark green bead which came from the sea was described by J.R. He said these were strung with long white beads in between "to make it pretty and hold the beads together." He said this cylindrical bead was a certain rabbit bone, long, straight, hollow, and white (possibly the clamshell hinge; possibly a local substitute. -- A.H.G.]. A length of bead money which was measured from the center of the wrist
[804] around the edge of the extended hand was worth a fixed sum. Such money, in definite units, was used to pay for baskets and for any object, services, etc. While goods were used for payments or for trade, money was the preferred tender.

436 Soapstone beads 1/2 to 3/8 in. in diameter
324 and 1/8 in. or less long, with a 1/16-in. perforation, were "made in a belt" and traded for a basket, said M. M. had ten such beads she had found on the ground around Picayune. She did not know how they were made, but claimed they were native. [Perhaps these beads were worked into belts like those of Yokuts to the south; perhaps however, M. really meant strings of bead money. -- A.H.G.]

276 Tobacco.---Old people watched for the to-
bacco plants to ripen. When full grown but still green, the leaves were gathered, dried out somewhat; it remained a greenish color. The leaves were stored in a dry place, a little being taken out to smoke as wanted. "It smelled pretty near like white [man's] tobacco," said J.R. A tobacco of sweeter variety than that at Coarse Gold was said to grow farther north.

Cakes of tobacco were made from the dried leaves, pulverized and mixed with water. These little biscuits were two or three inches across,

[115] An exorbitant sum, perhaps named in the hope that Thrall was going to buy. The impression is made that none
[487] of these informants knew anything about bead money. Their
439 statement that the obviously Spanish beads came from the ocean is entirely reasonable since that was the aboriginal source for all bead money, and Spanish beads came via the same trade route in native hands. -- A.H.G.

[P. 203 9] Chukchansi

Dancing

535 No specific dance performance was described, but J.R. gave a few generalities. Dancing groups were usually composed of four dancers and an accompanist singer. The dancers wore a loincloth [breechclout ?], feathers around the neck [sic], and something around the head "that looked kind of funny." They might [302 439] have specks of white paint on their faces, or sometimes red paint obtained from the Eastern Mono. Not all the dancers used red paint. Often the Miwok used it when they came over for a dance.

The dance steps were standardized. J.R. characterized those of the Chukchansi and the Yokuts of the San Joaquin River region as being done with an erect posture, immobile head, and heavy stamping step [the familiar Yokuts "piston rod" step]. The Miwok, he said, leaned forward, moved back and forth with a wiggling step, keeping the feet a little apart. (Miss Thrall suggests that this may have resembled a quick "grapevine" step.) There was a different movement for each song.

[534 533] The singer wore no paint nor feathers. His only instrument was the split elderwood clapper, about ten inches long. This was "waved up and down to make it crack while he was singing." The singer sang, then paused for an interval of rest.

GHOST DANCE OF 1870

764 344 There were three chiefs at Wasamo (near Ahwahnee).[141] This was where J.R.'s family "lived and died." There was a large burying ground there. Today (?) there is still a big round [dance] house which the three captains, assisted by a white man, built. The white man contributed some food for the builders.

622 796 When the chiefs wanted something done, they called their people to a big assembly fire. There were many people. If a festivity was planned, the chiefs said when it was to be, how long it was to last, and what singers, dancers, and guests should be told to come. Men were dispatched to get deer for food.

796 This kind of big time lasted about one week. The hosts provided the food. In the evening three or four men would dance, and sometimes as many women. Guests from other places also performed; each dance was said to [624] be different. There were certain men [dance managers] who went about giving instructions; the managers went in groups of three or four. [526] During the day games were enjoyed: footraces, football, hoop and pole played by the women, and the hand game by both sexes.

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[141] The location of Wasamo is uncertain. J.R., in this connection said "near Ahwahnee": "they were living at Ahwahnee, that is where they had that dance."

[P. 203b] Chukchansi

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796 When the Ghost Dance was introduced at Wasamo, J.R. was about ten to twelve years old. A few whites were about, but not many. Chinese [177] and Mexicans were looking for gold; there were Chinese camps all along Fresno River.

A group of people came from Bishop Creek [775] and told the people at Wasamo that their dead had returned to life, that "they had come up out of the ground." They told the people at Wasamo to dance; that, when the dead came, they would bring with them a small piece of food ["Indian food"] which would prove to be inexhaustible, no matter how much was eaten from it.

They danced in a circle, men and women [535] holding hands and dragging their feet. There was no special dress: the aboriginal costume [302] was still in use. However, in the morning after bathing, red clay was put on the face. This red paint was brought from Bishop Creek, as the Miwok and others did not have it.[142] The men from Bishop Creek sang while the others danced. These singers each had a single eagle wing feather tied on the head "with some kind of rag." No one else wore feathers. The dancing continued all night and in the morning everyone went to bathe. Even little children were put in the water and washed.

This initial event lasted about one week. About a year later, after more people had died, there was another. J.R. thinks that there were about three of these dances in two years. There was the first at Wasamo [or at Ahwahnee ?], another at Bill Basall's (Bersell's), which is the site of Aplau, Slokmič's village, and another near here at Totono which is about a half-mile across the creek from J.R.'s present house. The dances were abandoned after that because no dead people came back: Said J.R., "Never seen one back here yet!"

SUPERNATURAL POWER AND SHAMANISM

Sickness

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776 Several anecdotes of illness were told by N.W., whose father-in-law was a shaman. In spite of the fact that she believed this man, Xatali (Bill Wyatt), responsible for the death of several of her children, she bore him no grudge; in fact, claimed that the fault was not really his. He was a good man: the illnesses and deaths he caused were due to his being subject to his supernatural helper's will. His helper was Coyote. He killed seven of N.W.'s children "because if he didn't kill his own son's children, he would die himself. Coyote would tell him to do it or he'd die." After
754 N.W.'s seven children were killed, she "didn't have any more left, so he had to die himself."

[439] [142]Red paint was a trade article between Eastern Mono and Yokuts. It was not newly introduced at the time of the Ghost Dance, as implied by Powers (p. 381).

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22. na''an: hill above Hershberger Ranch
23. woho'naga'tiri: Redwood Mountain. This is the only name said to have a meaning (lit., redwood mountain), but that this should be the only one seems dubious.
24. tipa'čivo-no: Old Baldy Mountain (Big Baldy Ridge)
25. penama'ti: "a big rock north of the sawtooth crags." Not located, possibly Buck Rock
26. paso''owi: camp at Black Ox Springs, not located
27. pa'čiata'wi: Big Meadows
28. pasiwa'na: John Crow's Hollow, where men went for arrow canes
29. warosa'giti: twin peaks in the Gawia plain
30. koiwoi''iu: Badger
31. kiču''u: Ash Springs
32. tuša'o: "salty water," near Ash Springs
33. wiwa'nao: Owl Mountain
34. tulna'o: fish camp
35. o'polo'o: meaning "in the sun"; fish camp
36. mučati'': Stokes Mountain

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773

There are two big peaks in the mountains, says B.O., called Pa'wijwiyu (Map 5: Local Map G, no. 2, Obelisk) and Kai'binum (Cyclone) (no. 11, Buck Rock). The former is elder brother to the latter. Kaibinum, the younger, said to his brother, "Let's take off our shirts and fight!" At this Pa'wijwiyu pulled off his shirt, but the challenger merely shook himself and pulled his shirt up in preparation to removing it. Both brothers shook their bodies, but young Kaibinum did not get his shirt off in time and his older brother hit him with his club. Kaibinum, a smaller rock than his brother, kills deer and drops them down into the canyon below. (California Tehipite Quadrangle Topographic map shows Buck Rock as 1200 feet lower than Obelisk.) The same story was related by the Wobonuch informant, G.D., but with the relative ages reversed.

Trade

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Trading was carried on with the Eastern Mono (yo''pwets), who came over the Sierra Nevada and down to Eshom Valley by means of a trail which came through a pass just north of Old Baldy, down Redwood Canon, across Pierce Vailey, and into Eshom to Čitatu. From there the traders would go on down Dry Creek, following the Waksachi route, to the Wukchumni and Gawia. About a dozen of the Eastern Mono would come as a group. Women sometimes came with them to sell baskets, which were considered finer than the local Waksachi ones. An occasional woman would bring her entire family and stay the winter. While some local man might live with her, she would not be taken to wife and would return home in the summer when

the passes were again open. The Waksachi never went east to trade; on rare occasions two or three young men might go over to visit as a kind of adventure. The Eastern Mono never came to social functions, the Ghost Dance of 1870 being the first contact of a social order.

The articles brought from the east to trade were: rock salt; piñon nuts; mountain sheep skins (diwe´s:p); moccasins; a sleeveless buckskin jacket sewn up the sides; leggings of foxskin cured with the fur on, which were worn tied above the ankles and just below the knees; baskets; pine sticks for lifting hot cooking stones; sinew-backed bows; unfinished obsidian arrowheads. Payment was made in humana beads and smaller beads, acorn meal, and fine Yokuts baskets. In later days red beads and Spanish blankets were wanted by the Eastern Mono.

When the Waksachi were encamped at Gaines Flat, the Telamni, Gawia, and other valley dwellers would come up to get stone mortars and pestles. They asked the Waksachi to sell those very things they were using; the Waksachi never took any others along for trade. (Perhaps this relieved them of the burden of carrying them home on the upward journey, having had their use of them.) B.O. here interposed a description of the Telamni mortar, which was made from the crotch of an oak tree. The Telamni also wanted small stone mortars of the type used for tobacco. While they wanted stone mortars for themselves, they, in turn, sold their oakwood mortars to the Chunut, Tachi, and Wowol of the lake region.

Warfare

B.O. stated that the Wechihit, Choinimni, and Hoshima (Northerners in general) would come over jointly to fight the allied Waksachi and Wukchumni. These fights were rare and were tactically simple; they were called una´na pi´dikan. There were no special officers of war, but certain brave men would be acknowledged leaders on these occasions. The leader stood back and directed the fighting while the opposing warriors lined up, each man shooting at the one directly opposite. Bows and arrows were the only weapons; no spear or shield was used. There was no waiting for a dream or omen before going into conflict. The causes of these hostile interludes are obscure.

Raiding for horses became a favorite aggressive activity after their introduction by the Spanish on the coast; they were available in the valley in, roughly, 1800 and after. Four or five men would go west to the valley plains, and probably to the enemies mentioned above, to steal a horse, which they would then lead off, kill, cook, and eat. The Waksachi never stole from the Wukchumni. There is a strong desire for horse ownership among these people even at the present time, 1927.

[P. 216 9] Western Mono NS25

W Y 342 W Y [574] W Y [361]

frame bands and hanging baskets, jerked meat, skins, and other things hung from them. There was no special place of honor for a guest to sit or sleep, though the preferred place was thought by B.O. to be just inside the door on either side. The senior or authoritative woman of the household who was responsible for the preparation of meals usually sat and worked just to the left of the entrance as one entered.

There was no village plan, or defined location for chiefs' or doctors' homes.

While the Waksachi used the conical house, the oval type, characteristic of the Wukchumni and other foothill Yokuts, was the more common, according to B.O The floor space, which was some 15 feet wide by 20 feet long, was not dug down, but were down eventually from constant tramping.

Two forked poles supported a center beam or ridgepole 10 to 15 feet long. These parts might be of alder or oak. The frame was of willow "or any kind of good wood." The side poles were laid against the center beam, and those at the ends were laid into the forked post. These side poles, while held in position by horizontal withes, were not bent to form a curved roof line, as in Yokuts houses, but, lying straight, produced an obtuse-angled gable.

The walls were covered with a thatch of grasses, seldom a thatch of tule (fig. 1, b, Pt. I). The whole process was the same as for the conical house. Both men and women tied this thatch on, although men made the frame and women the thatch "skirt."

The doorway, which was invariably in the long side of the house, was covered by a mat of twined tules stiffened on each side with willow sticks lashed along its edges. The door was not fastened to the house, "just leaned against it."

There was never more than one room to such a dwelling, nor were there partitions. "A man built his house the size he needed and he never added a room" (B.O.). The fireplace was in the center, the smoke escaping through a slot left at the ridgepole between the last rows of thatch. Beds were made of pine boughs, obtainable near Eshom Valley, or of tule mats. Rabbitskin blankets were the preferred covering, though these often had to be obtained by trade with the valley people. No type of pillow or head rest was used. [The idea of a wooden head or neck rest B.O. thought very funny indeed.] There was no place of honor.

W Y 352 [237] 439 [522] 513

No plan was followed when setting up houses in a village: "anybody built where he liked."

The bark-covered house (ṭoṭo´pti, Michahai) was made on a conical framework which had as its basis a single forked center post. Occasionally two forked posts with a short center beam were used. Against either the single fork or the center beam were laid stiff poles, rather close together and lashed to their sup-

1: Gayton E-5 (1925-1930) 1948 NS29 Yokuts NS29

Western Mono NS25

W Y 343 515

clusiveness. Women "never went near the place" (B.O.). The favorite time for sweating was the late afternoon, between returning from hunting or other duties of the day and the evening meal at sundown. After the sweat the men ran out to bathe, and then back into the sweat house, where a reduced fire dried them and prevented chill.

W Y [513]

Single men slept in the sweat house but, whether sleeping there or at home, a man invariably rose with the morning star and went immediately to swim.

The single-post sweat house had the earth excavated for about one foot over its proposed floor surface. A forked center post was erected, and into its crotch were laid the ends of many straight poles very close together. The interstices were filled with still more slender willow rods. Then earth was piled over the whole. The doorway, which S.O. said "was small but you didn't have to wiggle or crawl through," was constructed as described above.

There was one fire directly inside the door. Anyone got wood or kept it burning: the winatum had no special duties in this respect. B.O. thought the single-post house held seven to ten men, a two-post house, eight to twelve. All men did not indulge: "some did not like it." When a visitor arrived, he would be offered a sweat. Women "did not go very close" to the sweat house. If a woman wanted a man who was in there, she would send a boy or male relative for him.

A breechclout was not worn, nor any type of penis-protector; if the heat was too intense, the hands were held over the organ. Kneeling posture was maintained while sweating.

"Any man who wanted to could build a sweat house, but he always asked the tia'a [chief] first." There were two small ones (single-post) and one large one (2-post) at Tušao. A new one was seldom put up before an old one burned or showed signs of decay.

W Y 515 533

No dancing was done in the sweat house, but singing was frequent. Some good singer (ile'kič) would lead in singing songs used outdoors to accompany dancing; there were no special songs for the sweating occasion. Often a man would go in there to play the flute (u'ṭač). This pastime was particularly popular when men were sleeping there all night.

Dress and Bodily Ornament

W Y 291 [439]

Footgear.---Normally people went barefoot. Some men had deerskin moccasins (name not recalled) which were bought from the Eastern Mono. S.O. could not describe the pattern clearly: it was cut in one piece with the fold on the inside of the foot, the seam on the outside, and had a long flap as a tongue.

No sandal of leather or fibre material had ever been seen or heard of by S.O.

W Y 291 A sewn leather jacket was denied by S.O., yet other informants said a sort of sleeveless jumper with side seams could be bought from the Eastern Mono. (It is possible S.O. misunderstood my query.)

W Y [237 439] Rabbitskin blanket.---The Michahai and Waksachi, when on their camping trips to the lower foothills, caught jack rabbits. Sometimes they bought rabbitskins from Wukchumni, Gawia, and Telamni. They also saved and used the upland rabbitskins for blankets.

W Y 292 237 Dance costume.---The shaman's dance skirt, which he wore on all dress occasions, consisted of many 18- to 24-inch pendent strands of ša' string into which chicken-hawk down had been rolled. Each strand was tipped with a bluejay or flicker quill.

The headdress consisted of the usual two parts, the vertical feather bunch (čuha´o, Michahai; čuha´b^{i}, Waksachi) made of roadrunner quills, and the soft fluffy crown (se´ma, Michahai; sema´b^{i}, Waksachi) of crow feathers.

W Y 292 462 435 The skirt was made by either men or women, but the headdress was made only by men. An old man at Kičeyu (Dunlap) named Ko´´o was particularly skilled at making headdresses, which he sold at a price somewhat equivalent to $10.00

W Y 301 304 Ear and nose plugs.---Everyone, said S.O., had his or her ears punched. This was done with a fine pointed manzanita stick. The heated point was pressed from in front against the lobe, behind which was pressed a small flat stone. The stick was pushed on into the hole and left until the wound healed. Then a series of increasingly larger sticks were inserted. Cane tubes were sometimes inserted, and the men's quail-feather ear plug of the Yokuts was used. A women's ear plug, also derived from the Yokuts of the plains, consisted of a ring of abalone shell (li´la, Michahai) which fitted the aperture like a plug, and from which dangled short strands of clamshell-disc beads.

Similarly, in the old days, both men and women had the nasal septum pierced. A single humana shell bead was the favorite ornament for this aperture.

Y W 304 Tattooing.---There were no special practitioners of this art, "anybody could do it." The design was pricked in the skin with the point of a fine obsidian blade and charcoal was rubbed in the abrasion. The patterns were stereotyped. Women had vertical lines from lower lip to chin, but these were never used by men. Both sexes used horizontal lines running from the corners of the mouth to the ears, and bandlike lines on the inner wrist. Two old women, Bren and Sugarfoot, were noted for their ambitious decorations which consisted of straight wide lines commencing on the chin and continuing down throat, chest, and breasts. S.O. could recall no other kinds of designs.

W Y 302 [192] Paint.---Face and body paints were hapa´ka o čak (red), toiye´´i očak (white), and mutakei´wak očak (black, i.e., charcoal) [all terms Michahai.]

Y W 381 411 Not every man could make this kind of bow, but B.O. did not think that the art was confined to families. He stated that the Wobonuch made the best bows; the glue on theirs was clear, that on Waksachi bows murky.

Y W 411 For all types of shooting the bow was held in the left hand, with its left end about 30 degrees above horizontal. The left hand was so held that the joint of the third (middle) finger was slightly higher than that of the second (index) finger so that a groove or slight hollow was formed between the third finger and thumb[156] in which the arrow rode (fig. 10, h, Pt. I). Only one type of arrow grasp was used, that between the thumb and first bent joint of the second (index) finger (primary release); there was no hold on the string itself (fig. 10, i, Pt. I). Arrow butts were not thickened.

Four forms of arrow were distinguished: those for birds (pa·ga); for squirrels, rabbits, fox and other small game (pa·ga); for deer or vicious animals such as wildcat, cougar, and bear (u·'tipa·ga); and for war (gai·'wani). The first was of alderwood (napa·'apᵃ) in a single piece. When scraped down with an obsidian blade, these were straightened by being heated over coals, bent and turned in the hands and over the knee. The self-points were ground down on stone and hardened by heating. The feathering was of three split feathers from a hawk wing. The butt was nocked.

For shooting birds a simple alderwood arrow was tipped with four small crosspieces tied on perpendicularly to the shaft (fig. 10, d, Pt. I); the butt was not feathered.

W Y [324] 413 The deer and war arrows were made of a single shaft of cane (ka'dkᵘd, Michahai; ha'obᵗ, Waksachi), the former long, the latter short. Both had obsidian points. To shape a cane arrow a heated stone arrow straightener was used; the cane itself was not heated. The cane, cut to the desired length, was grasped at each end and pulled back and forth across the stone groove with a rolling motion. It was sighted down its length for straightness.

The tip end, which had been squared off, was wrapped with six turns of fine sinew cord about three inches from the end. Then the end was turned on a sharp wooden point to open up the partition in the cane, for it had been cut off just before a joint, (the boring process was called marasoˈgomi o'o'homa, to-make-a-hole bone-drill). Into the hole thus made was W Y inserted the flint point (fig 10, f, Pt. I). The points for deer arrows were nearly round in cross section and had a round stem. They were [439] obtained in rough form from the Eastern Mono of Owens Valley and dressed locally. With this type of point no force other than wedging held it in place (fig. 10, g, Pt. I); it remained in the wound. Wood points were often substituted.

[156] The thumb is regarded as the first finger herein.

Fishing

Y W 226 Fish were scarce in the upper streams in Waksachi territory, said B.O.[162] They were captured by poisoning; no spear or harpoon was used (B.O. and S.O.). (Perhaps because of the smallness of the streams in their vicinity.) A plant called ya´ohao (not soaproot, but unidentified) was mashed and scattered over the water. The fish became active, jumping around in the water, then became stupefied, when they were scooped up in fish baskets. Men prepared the poison, merely by mashing the plant leaves, but both sexes took part in capturing the fish.

Foods

Y W 263 258 Salt.---Salt was obtained from "a bush that looked like a tomato vine." While living at Čoloku (on Fisher's Ranch), S.O.'s father-in-law and his mother's sister used to gather it. To obtain the salt a pit was dug about 2 feet long, 1 foot wide, and 1 foot deep. In this a fire was built and let burn down to coals. A grating was made by laying hardwood sticks across the earth's surface and on this the plants were laid. The whole thing was fanned with a fire fan. A material then oozed out of the plants and dropped on the coals forming large lumps. Then the whole thing was covered with earth and left overnight. In the morning the pit was opened and the salt, which was now a hard large mass, was cleaned of dirt. These lumps were trimmed and sold. This salt was eaten in tiny bits with meat; it was never put directly on food or cooked with it. The plant (or grass ?) which produced this salt was called in Michahai, ṭi´k:t koi´yo (smells salt), in Wukchumni, a´l:t, and in Waksachi, u´nabi. It was sometimes boiled and the liquid drunk to cure nausea. Salt or brackish springs were all called tuša´o.

Y W [264]

Y W [439] Rock salt (koiyo, Michahai) was obtained in trade from the Eastern Mono.

Y W 272 263 Manzanita cider.---Manzanita berries were gathered, mashed on a tray with a small pestle, and put into a sieve above a large clean mush basket. Water, poured over the mass, seeped through into the larger basket. A powdered plant called ča´m:t (Michahai; pasida, Spanish; unidentified) was added as a thickener and flavorer. There were four or five such flavorers known, but S.O. could not name them. The manzanita drink thickened as it stood, and people came to drink it at whatever stage they preferred. It began to sour after twenty-four to forty-eight hours and was no longer thought fit to drink. S.O. insisted that it was in no sense intoxicating.

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[162] Trout should be abundant; possibly he meant scarce in comparison with the numerous varieties of the lower foothill rivers and sloughs.

W Y 222 262 Yucca.---The yucca plants (o·'pa°dra, Waksachi) which grow on the mountains to the south and east of Eshom Valley (on Carpenter's Hill, B.O.)[163] were secured for food. In the fall men from Eshom Valley, mostly Waksachi, went up to dig up the roots which they brought back to roast. In the spring they again went up to break down with hooked sticks (po'dos) Y W [252] the tall blossom buds (o'b¹) and returned with them in back-packs. At home they were cut into 18-inch lengths, and laid on a large coal fire. As the stems cooked, they were turned with a long pole. When removed from the fire, the exteriors were caked with a hard ashlike substance which was scraped off. Then the pieces were split open and the tough pulp of the interior was chewed to extract the sweet juice W Y [462] 251] and the pulp was spat out. The whole process of gathering and cooking was men's work; one fire served for the group who divided up the yucca after it was cooked. B.O. said the cooked food was often dried, pounded up, and stored for winter use.

Piñon nuts.---Pine nuts (pone'diw°, Waksachi) were obtained in the hills east of Eshom Valley, near Ox Springs. Waksachi and Patwisha families went camping there to get them in the late summer (August-September). A long pole Y W [481] with a shorter one tied to it at an angle made a strong hook with which the men hoisted themselves into the trees and hooked and knocked down cones. The cones were full grown but still in a "green" or unopened state.

W Y 262 252 At the camp the cones were piled on a big fire of coals and turned with long poles until their exteriors were burned and ashy. Removed, they were piled in a big heap where they steamed as they cooled. Sometimes the cones were taken home, but more often the nuts were extracted on the spot. This was done by holding a cone butt down on a basket tray. With an obsidian blade the tip end was cleft four ways; the outside of the cone could then be stripped down in sections by hand. This let all the nuts drop out on the basket. Occasionally the W Y [439] nuts too were cracked on the spot and only the meats taken home.

Piñon nuts from Owen's Valley, brought over for trade by the Eastern Mono were called te'wa. They were superior to the local variety.

W Y 222 262 [462] [251] Acorns.---Fine groves of black oaks grew on the floor and slopes of Eshom Valley. It was the men's task to knock down the acorns while they were still slightly green; this was accomplished by means of the wooden hooks used also for piñones and cactus. The women picked them up and carried them home in burden baskets. All returned home in midafternoon. Everyone in the family assisted with shelling the nuts, which were shelled before being stored in the W Y 262 252 house. Sometimes one person would crack them and another do the shelling. For cracking, the

[163] Probably also on Cactus Mountain.

[P.229a] Western Mono NS25

W Y 482 [439] were identical with that of the Wukchumni. The Eastern Mono used these nets when coming over on trading trips.

MONEY, NUMERAL SYSTEM

W Y 436 [439] 804 All money came from the west through the medium of trade. B.O. thought that the Tachi themselves made humana; the Waksachi retain the Yokuts name for this slender tubular bead. They were valued at about twenty-five cents each according to B.O.; S.O. said they came about ten for one dollar, or eight if they were extra long. The small clamshell discs (močo´ko) were measured Yokuts-style around the hand and wrist (fig. 14, e, f, Pt. I). This length was then doubled and called a muke´č·t, and valued at about two dollars according to B.O. S.O.'s evaluation is wholly different, five cents for once around the hand and doubled (1 mukeč·t), ten cents. This is more in line with other statements. B.O. may have had the looped-up arm's-length unit in mind.

When red and blue European beads were introduced, these were measured by the handful, the red being more esteemed. The red ones were called piša´kono´gidi, the blue ones šil·´mkai in Waksachi.

W Y 192 802

Numerals (Michahai, S.O.)

1. y·t	15. y·´čum
2. pu´noi	16. čo´lpum
3. so´p·n	17. no´mčum
4. hatpa´na	18. mu´nčum
5. yit·´šn·l	19. no´npom
6. ču´lipi	20. punoi´ tsi'ao
7. no´mč·n	21. punoi tsi'ao y·t
8. mo´noš	22. punoi tsi'ao punoi
9. no´n·p	23. punoi tsi'ao sop·n,
10. tsi'a´o	etc.
11. y·´čam	30. sop·n tsi'ao, etc.
12. po´ctom	100. y·t pi´ča
13. co´yum	1000. tsi'ao pič·a
14. ha´čpan	

PLEASURES

Games

W Y 526 The following games were played by the Waksachi.

Shinny.---This game (koniu´šiko, Michahai; nanata´kow·t, Waksachi) was played with a hole at one end of the field and a post at the other. The ball had to be holed five times, though not successively, in order to win. When the ball was struck to a partner down the field and did not reach him, he had to come down the field to get it (i.e., the striker did not go after it).

W Y [525] This was the favorite game for betting and side betting. Usually three or four men played on a side. There was no special way of choos-

2: Kroeber E-5 (ca. 1918) 1953
NS29 Yokuts NS29

scalp celebration or victory dance. It can accordingly be concluded that scalping customs were of relatively little moment in Yokuts life.

MONEY.

Ordinary money consisted of strings of shell disks, of the wampum type, *keha*. During the past hundred years the Yokuts derived at least part of their supply of this currency through visits to the ocean. It is uncertain whether such trips were made in purely aboriginal times. The unit of measurement in the north was the *chok*, one and a half times the circumference of the hand. In the south the *chok* was somewhat shorter, and was reckoned as half the *hista*, two times the circumference of the hand.

Long perforated cylinders, perhaps made from the columellæ of univalves or from clams of unusual size, were called *humna* or *humana*, and were exceedingly valuable. They came from the south, probably from the Chumash.

GREETINGS.

There was little or no handshaking before the white man introduced the custom. Kissing was another undeveloped greeting. Mothers kissed their children, and lovers each other in seclusion; but no one else. The usual greeting is *hileu ma tanin*, "where are you going?" An old form, now less used, is, in foothill dialect, *ma-wit hide*, "you, hello"; more literally, "you, where?"

Like some other Californians, the Yokuts call the years "worlds." *P'a'an tanshi*, "world went," denotes the lapse of a year.

BIRTH.

A woman about to give birth sat on the ground grasping a stake set up before her. At the moment of parturition she was raised by an assistant who grasped her from behind. The umbilical cord was tied with one of the mother's hairs, and severed with a knife of cane or elder wood, according to locality. The Chukchansi buried the cord; the Tachi preserved it by having the child wear it over its abdomen.

Husband and wife were under equal restrictions after the birth of a child. They ate no meat or hard food, and did not cook, hunt, work, or touch tools. The Yokuts attached the greatest importance to these observances, some of which were continued until the remnant of the cord dropped from the child's navel, and others for several months.

The monthly condition of women—which was thought to be connected with the dark period of the moon—was viewed with less scrupulous abhorrence by the Yokuts than among many tribes.

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

"We made a fort, principally on account of our animals. The Indians brought otter skins, and several kinds of fish, and bread made of acorns, to trade.

"Among them were several who had come to live among these Indians when the missions were broken up, and who spoke Spanish fluently. They informed us that they were called by the Spainards 'mansitos', (tame) in distinction from the wilder tribes of the mountains.

"They, however, think themselves very insecure, not knowing at what unforseen moment the sins of the latter may be visited upon them. They are dark skinned, but handsome and intelligent Indians, and live principally on acorns and the roots of the tule, of which also their huts are made."

The last is one of the few complimentary things written by Frémont about Indians. A similar account of the Kaweah River Indians is given in the report of the survey of July, 1850, by Lieutenant George H. Derby. An extract from the Derby report follows:

"Upon the 14th we arrived at the river Frances, [Kaweah] a large stream nineteen miles to the north of the Tule. This stream flows nearly west from the hills and empties into the Tache Lake about twenty miles north of its southeastern extremity.

"It is, at the point upon which we arrived, divided into five branches or sloughs, four of which separate from the main river, about five miles above, joining again from one to ten miles below, while the southern branch has a separate and distinct course from the Sierra which joins the main stream in the marshy ground near its junction with the lake.

"The country, eight miles in length by six in width, contained between these branches, is a beautiful, smooth, level plain, covered with clover of different kinds, and high grass, and thickly shaded by one continuous grove of oaks of a larger and finer description than any I have seen in the country.

"At this time each of the creeks were at its height, they are deep and four of them much wider than the Tule River. Their beds were also obstructed with floating and sunken timber previously felled for bridges, which the high stage of the water rendered useless; and we would have found it difficult to cross had it not been for the kind assistance of the neighboring Indians who flocked to meet us, and eagerly went to work carrying instruments and other property upon their heads and

3: Latta Y-5 (1923-1948) 1949 NS29 Yokuts NS29
Yowlumne

as the Kaweah River and Tejon Canyon, back of present Tejon Ranchos Headquarters. TR6 574

YOWLUMNE BOWS AND ARROWS

The Yokuts Indians of the San Joaquin Valley had probably developed the science of hunting with the bow and arrow further than had most Indians. The Yowlumne, of Kern River, were foremost among the Yokuts in this work. At least three types of bows were made. The most common of these was a bow made of elderberry wood. On first thought it would seem that this material would be the most unsuited of any, but it makes an excellent bow. It can be secured in long, straight, clear staves and can be made into as heavy a bow as is wanted. It has a smooth, strong cast, which it does not lose for many years. 411 824

I once carelessly put a strung elder bow in a closet and did not discover it for more than a year. I unstrung it and stood it in a corner near my desk. In twenty minutes it was as straight as ever and had as good a cast as when it was first made. Elder-wood bows were easily made and were used exclusively in the San Joaquin Valley by boys for hunting all kinds of small game, and even by men for hunting antelope, deer, and elk. Strings for these bows were made of either hemp, sinew, or milkweed fiber. [283]

Good bows were made from native laurel, or bay wood. This tree grows in the Sierra in clumps of many small, straight trunks. It is easily split into staves, which are stronger for their size than those made of elder-wood.

Aged Yowlumne Indians state that the Frémontia of the Sierra can be used to make a complete hunting weapon—bow, string and arrows. They say that the bark can be stripped off and twisted into a good string. The large branches can be split into staves and the small, straight branches made into arrows. With a few primitive tools a disarmed Yowlumne in a few hours' time could manufacture a complete hunting weapon. [283]

The finest Yokuts bows were made of juniper and were backed with sinew. Juniper staves were traded from the Monache, or Piute to the east, or were secured in Yokuts territory in the upper Coast Range mountains. Bows of juniper were shorter than those made of other woods. They required more skill and labor to produce and were highly valued. [439]

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29
Wukchumne

123 438 484 been made into a mass of partially decomposed granite, with an overburden of about ten feet of soil. Soon Ada grunted again, and the whole expedition gathered around her. With a sharpened stick, which she used to dig basketry roots, she was digging into the soft granite and removing chunks of a heavy [317] blue-black material which she called *Kodeen* (Ko'-de-en). This, 135 I have since been informed, is a form of crude graphite, which was deposited in crevices in the top of the granite.

386 While the rest dug, Ichow explained to me how the old-time Yokuts used to prepare paint from this material and how they used to paint with it after it was prepared. A fire of dry oak wood was burned down to a heap of red coals. Then the graphite was dumped into a hole in the center and covered with hot coals from the rim of the fire bed. This was left until the entire bed of coals was reduced to ashes. After the whole mass had cooled, the burned graphite was carefully removed and placed in a bag of tanned deer-skin. Ichow later burned some of the material we gathered that day, but he did not follow exactly his own directions.

When the wood had burned to a mass of red-hot coals, Ichow placed the graphite in a portion of the bottom of a broken cast-iron kettle and sank it in the coals where it soon became red-hot. Within a couple of hours he removed the container and set it aside to cool. When I examined the material I found that it had changed character and color. Instead of being composed of several lumps of hard, heavy, blue-black material, almost exactly like the Rising Sun Stove Polish in use when I was a boy, it had slacked into a fine, sooty, black powder, in appearance like commercial lamp-black, but heavier.

[302] In this manner was gathered and prepared the black paint for which the ceremonies of the Yokuts tribes were famous. Officials who danced in these ceremonies painted their bodies black. In some tribes white stripes were painted across the chest and abdomen, vertical white stripes on the legs and arms, and large white spots on the face.

[439] White for this painting was prepared from diatomaceous earth, some of which was traded from Yokuts who lived in the Coast Range of mountains. One deposit of this crude chalk lies [317] near Lompoc and another near Crow Creek in Western Stanislaus County. It provided a pure white pigment.

[804] Both of the above pigments were mixed with plant juices to form a paint. One of my authorities, *Pahmit*, a *Dumna*

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

near Aukland. In an old cemetery on Grizzly Gulch, about on a line between the villages of Woody and White River, I found both yellow and red pigment in standard sized balls.

If the uniform size of the above findings is to be considered as more than purely coincidental they show a remarkable spread of standardization.

YOKUTS TRADE AND TRADE ROUTES

From widely scattered specimens of paint pigment, pipestone, and other objects easily identified as having come from specific localities, it is well known that the North American Indians had established extensive trade routes. From a grave near Dunlap in eastern Fresno County was taken a remarkable piece of pottery, a water jar of fired red clay, having on top a well modeled human head, and around the sides five openings. This jar was identified by Dr. F. W. Hodge, Director of the Southwest Museum, Pasadena, as probably being of *Mojave* manufacture. It was probably traded to the *Entimbits* Yokuts from the Mojaves.

In my own collection is a small decorated clay pitcher and a decorated clay pipe. The pitcher was excavated by a Tulare resident in an Indian burial ground at a locality known as Turnbull, west of Tipton. The clay pipe was collected from the cultivated surface of an Indian village site near Alpaugh. Both were identified by the late Dr. T. T. Waterman of Fresno State College as having come from northeastern Arizona, or southeastern New Mexico. In my collection are also an ancient rusted iron axe and the badly rusted pieces of what was probably once a sword. These were excavated from an old *Choinok* Yokuts cemetery, six miles east of Visalia. These were the only articles of white manufacture recovered from approximately six hundred burials excavated at that site and so must have been traded to that village soon after the Spanish first visited the coast of California.

Obsidian, or volcanic glass, from Mono and Inyo Counties, is found at Indian village sites along the California coast.

Coast seashells are found as far east as Arizona and New Mexico. Dozens of other evidences of Indian trade could be cited. But we have more than archaeological evidence.

Yoimut, last survivor of the Chunut Yokuts tribe from the northeast shore of Tulare Lake, related to me that organized trade was carried on between her people and those on the coast.

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Her verbatim account of such trade is reproduced in Chapter XIII near the end of this volume.

Ichow, a full-blood *Wukchumne,* quoted freely in this work, stated: "Some of our men go to coast to trade, go over the mountains to Owens Lake to trade. They go across to coast by where Coalinga is now. They go across the mountains from Tule River across Kern River where white people built that Jordan Trail. My grandpa, *Chechin* (Che'-chin), told me about that. His father used to trade at them places. From here he take deer skins, antelope skins, elk skins, *kadis* (kay'-dis) [steatite], *ahdit* [salt from saltgrass], and good baskets over to them Indians at Owens Lake. He bring back lots of fine *kots* [obsidian] to make good arrow point and some salt like white people use. He sell that kots and that salt here for our money and buy more things to trade."

The most interesting account I have been able to secure concerning Yokuts traders came from *Wahumchah,* one of the last two living full-blood *Yowlumne* Yokuts. For two generations back, his direct male ancestors were traders. His father was born at the Yowlumne village of *Woilu* on the site of present Bakersfield. He explained the position of traders in his tribe. Said Wahumchah, "My father told me he was born right where Bakersfield is now. His people had two villages there, one on each side river. One was on high knoll close by river. It was my father's business to trade and to run anywhere his *Teah* (Te'-ah) [Chief] wanted him to go. He was *Winatun* [Messenger]. Sometimes them people let fire go out in one village. Then someone had to make new fire with two sticks. Fire most always went out when it rained. Then everything was wet and it was hard to start new fire. Then my father would swim river and get fire from other village. If fire went out in other village he had swim across and take fire to them. That was his business.

"When my father carried fire he put it on top his head. He put some ashes on piece buckskin. Then he put some red coals on ashes. He cover coals with ashes. Then he roll that buckskin up and tie it on top his head and swim across river. Sometimes them coals get pretty hot on his head. They burn him pretty bad. Most time he got his hair burned off top his head. So Yowlumne call my father *Oi'-oi,* Roadrunner, because in them old timers' stories Oioi stole fire and carried it across the river just like my father did."

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Yowlumne

A few Yowlumne traders traveled to what is now Inyo County to trade for mineral salt, and for obsidian, the volcanic glass used in making arrow and spear points. They also traveled to the West Side to trade for asphaltum from the deposits near present Maricopa and McKittrick. Some venturesome traders traveled to the coast near Moro Bay to trade for abalone, Pismo clam, keyhole limpet, and periwinkle shells, from which some of their ornaments and money were made.

Many kinds of herbs, roots and seeds in addition to saltweed ashes and salt from salt grass, were traded, but to a limited extent, because the growth of most herbs and roots was wide-spread in the San Joaquin Valley. Dried wild blackberries were traded to the people who lived on the plains and lake shores away from the rivers, where those berries grew in abundance.

Yowlumne traders traveled as far north as *Yokohl* Valley, northeast of present Lindsay, to trade for steatite, or soapstone, from which were made their cooking vessels and one variety of bead money. Chalcedony, jasper, agate, and any other stone which was easily chipped into arrow points was also valued very highly. Rare curios or oddities of any kind had a high trade value. Quartz crystals, star-fish, sea urchins, cowrie shells, the canine teeth of grizzly bears, and any other uncommon objects, were certain of a ready market by trade.

To fully explain Yokuts trading and trade routes would require more space than is available for this entire article. But it is necessary to know at least something of this practice, which, because of the low mountain passes to both east and west, was probably more extensive among the Yowlumne than it was among most other Yokuts tribes.

According to old Yowlumne Indians, elk, deer and antelope skins, steatite and the salt from native salt grass were the local key articles of trade. They were scarce in much of the desert territory east of the Sierra.

Yowlumne traders would gather a pack of tanned skins, purchasing them with Yokuts money, and carry them to the desert, where there were deposits of obsidian, or volcanic glass. As there existed a set standard of values between deer skins and obsidian, it required only a short period of visiting, news exchange, and bartering before the Yowlumne trader was ready to return to his home on Kern River.

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

439 436 487 It is difficult to obtain a set standard of Yokuts values that white people can understand. It has also been very difficult to obtain from the Yowlumne an easily understood explanation of such values. Perhaps the simplest of these has been that between deer skins and obsidian, a bundle of fifty tanned deer skins bringing about fifty pounds of obsidian.

In Yowlumne territory obsidian could be traded for anything, and had a very high trade value. It could be taken to Yokohl Valley and traded for soapstone, or to the West Side and traded for asphaltum. Some traders carried obsidian to the sea coast to trade for the seashells named above.

A few definite things have been learned about the value of seashells, which were the basis of most Yokuts money. One of these is that the complete shells had little value compared to the beads that were made from them. From one periwinkle, or olivella shell, at most three beads could be made and this required much labor. One tanned deerskin was worth three such beads. Beads or ornaments made from abalone, keyhole limpet, or Pismo clam shells had more value than did those made from periwinkle shells. These ornaments, or beads, were much larger than those made from periwinkle shells. From these few facts can be determined the relative values of a number of Yokuts commodities.

When the first white settlers arrived in the San Joaquin Valley they paid the Indians as much as twenty-five cents for a large, tanned deerskin. Some were purchased for as little as five cents. This furnishes almost the only data available concerning the comparative values of Yokuts and white money.

436 685 In 1852 a Kaweah Indian boy was brought to trial at Visalia for shooting an arrow into a work ox and seriously injuring it. For this offense he was fined fifty buckskins. The fine was promptly paid by his people. From early records and the statements of pioneers we know that an ox was at that time worth from sixty to eighty dollars. If we knew what portion of the value of the ox the fine represented we would have a ready measurement of the value of buckskins. We are probably only justified in assuming that an uninjured ox was valued at more than fifty buckskins.

439 487 Wahumchah's grandfather and a brother of this grandfather were two of the four Yowlumne Yokuts who swam with Padre Garcés across Kern River at the Rio Bravo Rancho (present Oleese Ranch) in May of 1776. The great-uncle lived

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to tell Wahumchah of this experience, as well as about the old trade routes. When Wahumchah was a small boy his father herded sheep on Kern River for the Jewetts. From the hills beside Cottonwood Creek he pointed out to Wahumchah the old trails over which his father had traveled in trading to the coast and to the desert, east of the Sierra. In 1937, following the powerline road south of the mouth of Kern River Canyon, I drove Wahumchah to those same hills and had him point out to me the routes of the old trails his father and great uncle had pointed out to him, more than sixty years before. After he was a grown man, Wahumchah had worked at the Tejon Ranch and had traveled over several of the trails on horseback and had heard other old Yowlumne Yokuts relate the same stories his father had told about them. So the routes were well fixed in his mind.

Here is Wahumchah's statement, recorded in May, 1937, in his own words: "In them old days the Indians got no trail up Kern River. They go up Cottonwood Creek and around the mountain the way that old wagon road go to Whiskey Flat [Kernville]. Then the trail go over Walker's Pass or out Walker's Basin by Piute Mountain to desert. One trail go up to Tehachapi and out Oak Creek Pass to desert. Another trail to desert go up Tejon Canyon back Tejon Ranchos House. Next old trail go up Pastoria Creek across the mountain south to Quail Lake. I don't remember about one go up Grapevine Creek where highway is now. Maybe it did, but I don't remember it.

"Most important old trail go over mountain where them white men get oil long time ago [Old Sunset, southwest of present Maricopa]. It go by Paleta to Cuyama Valley. All trade from Santa Barbara, and Santa Maria go that way. 'Nother old trail go by Carrizo Plains to Coast. Then one more go by the same road you go now from Bakersfield to Paso Robles. I think that's 'bout last road I know to coast.

"But they got some trails in valley too. They got one trail on each side Kern River. One from Tejon cross Kern River where Padre Garcés cross. That's the one he come from Tejon. It run on to Tule River and Kaweah River. One trail go across *Trawlawin* (Traw-law'-win), San Joaquin Valley, north of Buena Vista Lake and one south of Kern Lake. Them old Yowlumne traders use them old trails all time. They go everywhere and nobody bother them. My grandpa and his

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439 brother take big roll of tanned deer skins, maybe antelope skins, to desert, bring back maybe fifty pounds *kots* (obsidian). Then 487 he make good arrow points and sell 'em for good Yokuts money, maybe shell beads, maybe *kadis* (steatite) beads. He sell one good tanned deerskin for one good kadis bead, maybe three good seashell bead."

The preceding represents all the definite information I have been able to record concerning Yokuts trading and trade routes, but around the remainder of the rim of the San Joaquin Valley are easy mountain passes which show signs of Indian encampments and which were undoubtedly old Yokuts trade routes. The fact that early Spanish and American expeditions traveled these passes, often guided by Indians, makes it almost certain that they were so used. Some diaries kept by scribes accompanying these early expeditions actually record that they were following Indian trails.

Most prominent of these old routes through the Coast Range are the following: Coalinga to San Benito and King City; Big Panoche Valley; Los Baños Creek and via Saucelito and Quien Sabe Valleys; San Luis Creek and Pacheco Pass; Orestimba and De la Puerta Creeks; Hospitál Creek; Corral Hollow; Buenos Aires Creek; and Altamont Pass. Over most of these passes roads were established early in the settlement of the San Joaquin Valley. Old trails through them connected with others paralleling the Coast Range and Sierra foothills and the west bank of the San Joaquin River and the lakes to the south. Along these three last routes were established the first wagon roads to traverse the length of the San Joaquin Valley.

THE YOKUTS MONETARY SYSTEM

436 It will come as a surprise to many persons that the Yokuts, so often contemptuously described as "diggers" or "the lowest form of human life," were among the few Indians in North America who developed a medium of exchange worthy of being classified as a monetary system. This writer had gathered data from aged Yokuts for about twenty years before he became aware of the fact that when the Spanish arrived the Yokuts were advancing out of the more primitive trade and barter culture into that of a system of monetary exchange. True, their monetary system was very crude, but the necessary elements were there and the money could not be successfully counterfeited. A penniless Yokuts could kill deer, tan the skins, carry them

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They were also placed over the eyes, ears, and/or 436
mouth of the dead, as Ichow stated, "So that dead person could 301
see, hear, talk good in *Tihpiknits'* (keeper of the hereafter) 764
Pahn (land)." Such use of Tahp has been found in some of the most ancient burials discovered in Yokuts territory, which indicates that it had long been valued by the ancestors of those people.

The most valued of all Yokuts money was made from the 436
shell of the famous Pismo clam. Most of this Pismo clam shell- 439
money was probably traded through Cuyama Valley from Canaliño neighbors to the southwest. Tejon informants have stated to me that the word, *Cuyama*, was the Canaliño name for the Pismo clam shell and that the Cuyama Valley was the channel through which these shells were traded to the Yokuts. Curiously enough, clam-shell ornaments are less common in adjacent Yokuts territory than they are farther north in Chunut Yokuts territory. My informers concerning the above were Rosa and Ramon Hino and Juan Losada of Tejon Canyon. Wahumchah, one of the last two living Yowlumne Yokuts, has told me that his tribe obtained their clamshell money through the Cuyama. Wahumchah's father and grandfather were both traders and his observations along these lines should carry more than ordinary weight.

I have heard no claims made that Pismo clam shell-money 436
had any curative or preservative powers, only that it had great 764
value as money. This is borne out by the use made of it in Yokuts burials. It was almost always placed in the mouths of the dead. *Yoimut*, an aged Chunut, once stated to me, "To pay them bad fish-people to let the dead person cross that narrow bridge to Tihpiknits' Pahn. They put it in the mouth so that dead person don't lose it and he sure to have it when he get to Tihpiknits' Pahn."

The Pismo clam ornaments were of three standardized 436
shapes and had holes drilled through them. Discs were made 321
in sizes from more than two inches in diameter to less than one- [531]
half inch. The edges of most of these were decorated with incised geometric forms in several designs. Indications are that the incisions were originally rubbed full of asphaltum. This bright black material contrasted strikingly with the white of the clam shell and made them the most spectacular and impressive forms of stone or shell money, or ornaments produced by the Yokuts.

[1 [i.e., spangles and ornaments of abalone shell.—Ann'ys]]

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

436 321 From the Pismo clam were also produced nicely smoothed and rounded curved objects with pointed ends. These were drilled from the pointed ends, the opposing holes meeting at the middle. I have never seen one of these objects taken any place in Yokuts territory, except from the mouth cavity of a buried skeleton.

Slender, straight-sided tubes were also made from Pismo clam-shell. They varied from three-eighths of an inch in diameter and three inches long, down to one-fourth of an inch in diameter and less than one inch long. Some were not cylindrical, being larger at the middle than at the ends. The Wukchumne Yokuts called these *Cutscotch* (Coots'-cotch).

The most valued of all clamshell money were long, curved tubes. These varied with the size of the shell, the largest being more than six inches in length. They were slightly wider than they were thick and were perforated lengthwise. This perforation is the most remarkable feature of all Yokuts manufactures.

The shell of the Pismo clam is as hard as the glaze on a piece of china. To drill two opposing holes, each three inches deep, through such material, having them meet in the middle, is a feat worthy of modern tools in the hands of a practiced mechanic. Mayfield, who was a white man raised by the *Choinimni* [439] Yokuts, stated to me that an old artisan of that tribe obtained in trade slender objects which he (Mayfield) believed were "walrus, or sea lion whiskers." The large ends of these were pounded between two rocks, forming a sort of short-bristled brush. A shallow hole was drilled with a stone-pointed drill as a starter. Fine, sharp sand was placed in this hole. Then the brush-pointed "whisker" was placed on top of the sand and spun between the palms of the hands. Mayfield had not seen the Pismo clam money drilled in this manner, but had seen other hard objects so drilled. From Ichow I learned that an identical process was used by the Wukchumne and Yokodo. The only variance was that no "whisker" of any sort was used. The drill was made from the slender chamise-root splint used in reducing [412] the square steatite beads to a round form. Said Ichow, "That old fellow take piece of green chamise root and scrape it just about this size [illustrating with a piece of ordinary bailing wire which he picked up beside his chair and which he continued to hold in his hand as he talked]. Then he hold this piece root over fire and scrape and dry him good and straight and hard like

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Acorn soup was dipped from the basket with the first three fingers and placed in the mouth. Both it and the cake were very nourishing, being rich in oil and starch. A small piece the size of a base-ball is said to contain food value equal to more than an entire loaf of our bread.

To the uninitiated, acorn bread is a tremendous disappointment. To me it tasts flat and chalky, but white persons who persist are said to learn to like it.

SALT FROM SALT GRASS

There being no natural deposit of mineral salt accessible to the Yokuts Indians of the San Joaquin Valley, the obtaining of this important article of diet was a serious problem. Along the east side of the San Joaquin Valley it is quite likely that a portion of the salt used was mineral salt obtained from mountain Indians who had in turn obtained it by trade from the inhabitants of the desert region east of the Sierra, where natural deposits of this mineral were common. We are assured by old Indians that salt obtained in this way was very expensive. Many beads of shell or steatite were demanded for a few handfuls of the crude salt offered.

A large portion of the salt used by the Yokuts tribes in the San Joaquin Valley is still obtained from salt grass. Although the method of obtaining this salt has been observed by white settlers since as long ago as 1850, it is remarkable that there have been available through libraries and newspaper files no detailed accounts of the method of harvesting and refining it.

All salt grass does not bear enough salt to make it useful as a source of that material. Most persons who have walked through some fields of salt grass in the early morning have found it covered with what appeared to be heavy dew, have later had the experience of finding their shoes covered with a heavy incrustation. This is the salt used by the Yokuts.

The salt is exuded from the leaves of the salt grass and adheres to them in small globules smaller than a mustard seed. In the early morning this excretion exists as a small drop of liquid. By noon of a warm day it has become solid and by mid-afternoon is dry and hard and can be removed from the leaves of the grass by threshing.

As the grass itself is not desirable, the problem exists of removing the salt without breaking up the brittle leaves and

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"Jackrabbit" Bill Browning, who passed away near Delano about 1935. Surely the old lakes were a fisherman's paradise.

In addition to the lake trout described, a small turtle was captured in great numbers and shipped to the San Francisco market. Tulare Lake terrapin was a common article on San Francisco and other bay city menus.

SPEARING FISH

Although we hear much about hunting with bows and arrows and we see some bows and arrows in collections of Indian relics, it is probable that throughout a great portion of the San Joaquin Valley the spear was in as common use as was the bow and arrow. This is particularly true along the tule swamps and lake shores throughout the central portion of the valley. And who has seen a Yokuts spear?

From about the shores of Tulare Lake a collection comprising almost 1,000 chipped stone points contains approximately 700 that would be classed as too large for use with an arrow. Several hundred of them are larger than needed for a spear. From what we know concerning the life of the Indians who were here when the white people came, a considerable portion of the fish taken from the lake were obtained by spearing. How this was accomplished upon the lake has been outlined in the preceding chapter concerning fishing rafts.

For a description of the method of taking fish along the various valley streams, we are again indebted to Mayfield. His description brings home to us the fact that the modern salmon spear, or gig, having a detachable point, was used by the local Indians long before white people were known in this territory. His account follows:

"Trout and other large fish were speared with a gig almost like a modern salmon gig. It had a long slender pole for a handle.

"This pole was often as long as twenty feet, and about an inch in diameter. It would be as straight as an arrow, and as smooth as glass.

"A fisherman took a great deal of pride in his fish gig and would keep it polished until it was shiny.

"On the larger end of the pole they would fit two short, pieces of hardwood or bone. One of these was sharp, was lashed on one side of the big end of the pole, and projected beyond the end of the pole about four inches. The other piece was

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

159 825 854 To make a little baby strong we used to get fat from a turtle and rub it on all of his joints. That made them strong. We used turtle fat because he can run and swim as soon as he comes out of the egg. We called the fat *hin'-kah*. To make a little baby stand up we put a soap root brush in the fire so the ends glowed. Then we touched it against his knees. He would straighten his legs and stand up.

159 352 854 My people did not make their baby cradles like the Wukchumne did. They made most of them of tules. They were nice and soft for the baby. I think they were better, too. We made another cradle of a forked stick with small sticks fastened across it. It was covered with tules when we put the baby on it.

159 854 We kept a piece of *kuts* (koots, soapstone) hanging on the baby cradle to use when we changed the baby. We scraped powder from it to put on the baby. It was the same as your talcum powder. We called this cradle-stone *me-ha'-te*.

159 361 From the time I was a girl I knew lots of old Tachi. I heard them talk about the West Side and I remember a few things over there. The Polvardera, southeast of Coalinga, was called *Sawkeu* (Saw-ke'-oo). There was good water there. The Indians camped there to hunt antelope.

There used to be an old Tachi village called *Wahl'-muh* on the west side of Tulare Lake. I knew the last chief at that place. He was an old uncle of old "Lemoore Bob" who used to dance.

[103] The Poso Chaná was called *We'-kit Le'-wis*. It meant Pieces Cut. Four ridges ran up to the hills from the place. They looked like they had been cut out with a knife. The water at Poso Chaná was not as good as at Sawkeu. It was a little salty.

159 439 The Indian traders used to meet at the Poso Chaná to trade with the coast Indians. *Kahn'-te* was the oldest chief of the Tachi I ever knew. He used to have charge of the trading. He told me all about it and taught me his song. I have always remembered it. Lots of other old-time Tachi told me about it, too.

The bead and seashell traders from the coast met the Tachi traders at Poso Chaná. The Tachi and the other Indians would not let the people from the west come right up to the lake. They were afraid they would learn how to get things without trading.

3: Latta Y-5 (1923-1948)1949 NS29 Yokuts NS29

The people who wanted to trade carried their things in baskets on their backs. They had to have their *Teah* (Te'-ah), chief with them. When they came up to trade they marched up in a straight line from each side. The Teah was in front.

When the two parties got close to each other they all took hold of the basket straps at the sides of their heads and swung from side to side, singing:

Ho-hoo'-hoo Yoo-'nah
(sung five times)
Hah-ha'

He-ke'-mah was the name of that song. That was the name of the trade too.

When the song was done each one took his basket down and spread his things on the ground in front of him. The rows of things were about ten feet apart. Then the trade started. The Teahs did all of the talking for their people. They talked to each other and agreed how much each could have. It was all done by rules.

Kahnte told me that his people used to trade off fish, *kots* [obsidian], salt grass salt, and some seeds. Sometimes they traded *kuts* (koots, soapstone) beads. They brought back shell beads and sea shells, *Traw'-neck* [abalone], *Cawm-sool* [clam], and *Caw'-sool* [olivella, or periwinkle]. Kahnte told me about a funny dried thing that one of his men got in a trade. I know now it was a star fish.

In the old days the Indians who lived by the lakes got their drinking water from the lakes. Around the edge of the lakes the water was muddy and hot. The Indian women used to take a basket and wade out into the lakes until the water was about four feet deep. Then they sunk the basket to the bottom upside down. Then they turned the basket over and filled it. The water at the bottom was lots cooler than on top and it tasted lots better, too.

Now Tulare Lake is dry. My old people told me that once it dried up a long time ago. The creeks all dried up too. My people had to go to their friends at the hills. Some of them went up Deep creek. They almost died before they got water about where Farmersville is now.

You ask me, "Will Tulare Lake ever fill up again?" I got only one thing to say. Yes. It will fill up full and everybody living down there will have to go away. I like to see that time myself. [it filled again in 1938]

4: Gayton E-5 (1925-1930)1946
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221 796 in which to tell the prehistory of the Yokuts world.[15] Six public ceremonies dependent upon or motivated by environmental changes had engaged the community's attention, interest, and support during the year: Datura Drinking, Flower Festival,[16] Rattlesnake Ritual, Salmon Rite, Annual Mourning Ceremony, and Bear Dance. There were no other important community festivities; that is, all whole-community or whole-tribal ceremonies were determined by the seasonal calendar. While other events of interest occurred and were witnessed as spectacles by those who cared to be there, those of greatest public importance all had basic environmental associations.

● 439 484 [501] Trade relations of material importance to Yokuts and Western Mono were regulated by environmental conditions. Thus, during the spring when high water filled the sloughs connecting lower Kings River and the north end of Tulare Lake, large parties of Yokuts, e. g., Choinimni, traveled by balsa from the foothills to the lake area to fish, trade, and doubtless intermarry.[17] Cultural affinity between Northern Foothill Yokuts and Lake Yokuts probably in part is due to this large scale social intercourse made possible at the season of high water.

Trade relations between Eastern Mono (Owens Valley Paiute), east of the Sierra Nevada, and their linguistic relatives and neighbors of the Yokuts, the Western Mono, were limited to a few summer weeks when known mountain passes were open to foot travel. The trans-Sierra visitors, not welcome in Yokuts villages, rarely ventured alone beyond the Western Mono groups. However, occasionally a woman coming over with a trading party remained there for the winter: once caught on the west side of the mountains she had to remain till the following season. Sometimes she had a child with her, bore a Yokuts child, or was pregnant by the following summer.[18] The diffusion of the triangular winnowing tray and hooded cradle of Eastern Mono type amongst Yokuts women may have been abetted by this circumstance as much as by impersonal trade with the neighboring Western Mono.

In the southwestern section of the San Joaquin valley trade with the coastal people, e. g., Chumash, may have been temporarily halted by severe weather in the Tejon country (the intervening mountainous region), but not sufficiently to enforce long residence on incoming tradesmen.

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15 The adventures of the pre-human animals, not, be it noted, the history of the tribal unit, of humans, or of distinguished individuals, or of "gods."

16 Flower Festival is my label for convenience; public interest and reaction to the floral season was general and was patterned, but not welded into a named ceremonial form.

17 A unique account of such a trip is given in F. F. Latta, *Uncle Jeff's Story* (Tulare, California, 1929), pp. 29-31.

18 Always they eventually returned home to Owens Valley, I was told; none appear in Yokuts genealogies.

4: Gayton E-5 (1925-1930)1946

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Thus two types of environmental factor, topographic access or hindrance, and "weather permitting" or hindering, affected the economic relation of the foothill Yokuts with their neighbors. Easy access does not necessarily mean exchanges of goods or other cultural items, but barriers do retard them. On the other hand, differing environments mean different products, and had Eastern Mono products been identical with Yokuts (yet equally inaccessible) the impetus to exchange would have been wanting. The topographic barrier was surmounted, but the weather barrier could not be, and it presumably served to maintain the strangeness and hostility between Eastern Mono and Yokuts, which only was assuaged temporarily and periodically by the presence of the mutually acculturated intermediaries, the Western Mono.

As suggested by the adjustments of trading periods to the seasonal environment, the physiographic setting was a factor in other tribal relationships and directional emphases. The plain or floor of the San Joaquin valley is abruptly ended on the eastern side by the rising wall of the Sierra Nevada; there is no slow progression. Of the foothills, the most meagre are treeless cones planted at the edge of the valley floor; behind them are higher, larger, interlocking cones blending into sharply massed mountains above which stand snow-capped peaks. This topographic antithesis was reflected in non-material culture of the Yokuts. A directional distinction of eastward, upstream, mountainward (no´tu) versus westward, downstream, plainsward (to´xil; da´ţu) gave names to the moieties (where they occurred): Nutuwich, Tokelyuwich; it regulated spatial arrangements at large ceremonies; wars and competitions in myths were attributed to uplanders and lowlanders; and in cosmogonic beliefs eastward beyond the mountains is the mysterious "home" of the supernatural animals, while westward beyond the ocean is the "home" of the dead, a place of feasting and merriment.

Other directions of the conventional six were also important.[19] North (hosi´m) and south (homo´t) were constantly used as general designations for other Yokuts people, individuals or groups, when the tribal name was not known, i. e., "northerner" (hoso´mo), "southerner" (humti´nin). East and west (nutu´wič; tokelyu´wič) were rarely used for directional labels for tribes, not because they were moiety names (which the Central Foothill Yokuts lacked entirely) but because the east-west span of the valley is short, and close knowledge of neighbors by tribal name ran along the east to west flow of the streams. Comparably, the intervening watersheds discouraged north-south travel. In general, westerner (to´kya) was a term for any people living far west or southwest of

19 Usually named in order: S, W, N, E, U, D. (No color symbolism was associated with direction.)

4: Gayton E-5 (1925-1930)1946
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the Yokuts (e. g., Salinan, Chumash), while collectively unknown eastern groups were called mountaineers (do´mtui). The north and south dimensions of the valley are greater, and tribal contacts in the floor of the valley were so aligned along the water flow between Kern, Buena Vista, Tulare Lakes, and the lower San Joaquin River.

Of the two other directions, up (ti´pin; sky, above) and down (ati´l), the latter had no special significance beyond myth reference to an underground gambler whose home might be reached via a badger or gopher hole.[20] Upward, "aboveness," was of great religious significance, the embodiment of sacredness and supernatural power. Veneration was manifest in many ways, especially in a religious-motivated looking upwards, looking at the stars and sun with prayerful phrases on the lips, basking in the sun, getting magic "airshot" from the sun during shamanistic contests. Supernatural power was called ti´pni; it was the essence of all "aboveness" and the power derived therefrom, though the term might be applied to anything weird, holy, or peculiarly hyperphysical.

To the earth itself (di´nit) there was no special attitude, nor to the plants growing on it save the narcotics tobacco (so´'og) and *Datura* (ta´ñai). For example, for all the essential uses earth was excavated without special concern—house, sweathouse, or grave pits, for pottery, colored earths for paint. Similarly ordinary stones were taken for implements, motars and pestles, though previously shaped stones such as the "charmstones" of weather shaman, were regarded with awe, as ti´pni.

On the other hand, water (i´dik), especially that of springs, was venerated: "water is immortal because it is everywhere; it is living all the time." Springs were addressed prayerfully, sacred eagle down was scattered near them, and a little water was sprinkled on oneself with a request for long life. Other expressions of this attitude are found in early morning bathing (more than a mere cleansing act), and in myths, wherein submersion or application of water was the standard method of magical resuscitation.

The stars were not ignored; on the contrary, the Morning Star especially was of great importance: people should be up in time to see it, greet it with a prayerful request for "a good world" and longevity. The Pleiades gave luck to gamblers; other stars were dangerous lures to men. Eclipses of moon or sun were hailed with shouts of discouragement, and excessive thunder was admonished to cease. In short, even heavenly bodies were part of the immediate, reachable environment.

Aspects of time, of the place of animals and of man in the world were em-

20 There was no concept of stratified worlds, or of previous and successive worlds.

6: Gayton E-5 (1925-1928) 1930
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595 While polygamy occurred among Yokuts and Western Mono it was
622 not frequent. The chief was more likely than other men to have two wives. This was partly because of his wealth which permitted him to pay for and support them, and also because of the more numerous household duties in his menage. The chief's wives must have food
[574] ready for immediate preparation at all times because of the hospitality extended to visitors in the tribe; they cared for the poor of their village, and at the same time entertained socially in a more lavish manner than other families.

556 In monetary wealth the chief always surpassed his fellow-citizens.
622 The manner in which his worldly goods were acquired is not completely clear but there are several known sources. One of these was
[439] through commercial trading of desirable objects such as eagle down, and of articles traded with trans-Sierra Mono, or between local tribes.
[778] The commerce in eagle down was controlled by the chief as the bird was sacred to him and could not be killed without his permission. On this matter a Wukchumni (Y) informant gave the following:[23]

622 Only a chief could order an eagle killed. He paid the man who
237 killed it three to five dollars for the bird. Some man or woman was
778 then asked to prepare the bird; they were paid for their trouble. The
439 large feathers were plucked off. The skin was removed with the down still on it. The leg bones were kept for making whistles. The meat was removed but only the fat saved for tallow salve. The feathers, down, leg bones, and tallow were kept by the chief, and these he sold to doctors or any other persons who wanted them for religious or ceremonial purposes. The carcass was given a special ritualistic burial, at which a mournful attitude prevailed.

622 This trade in eagle products brought some profit to the chief. The
237 demand for eagle down was constant as it was used by the majority
556 of people for religious purposes such as scattering during prayer, and
[755] to make ropes of down which had power in curing sickness. Such ropes were used by non-professional persons who had supernatural power as well as by doctors.

622 Further profit came to the chief through intertribal commerce.
439 Traders who came from other tribes with baskets, pottery, salt, tanned
556 skins, etc., would first go to the chief's house to state their business, as was customary with all outsiders, and to receive the welcoming meal. Hence the chief had first chance to buy the wares they brought and retail them to his neighbors if he so wished. As a man of wealth

[23] Sam Garfield; see Appendix.

6: Gayton E-5 (1925-1928) 1930
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622 439 556

he could take advantage of this opportunity to purchase desirable articles. The chief's house was often made headquarters for buying and selling when foreign traders appeared. Winatums were dispatched to notify other villages if the traders did not intend to go further.

622 756 541 574 [431]

Chiefs shared in the payment received by doctors of their tribe when dances were given for purposes of entertainment. Thus at the annual mourning ceremony the doctors' contest, which was an indispensable part of the ritual series, was performed by four to ten shamans. Some of the shamans were of the local or host tribe, but the majority were invited for the occasion. At such times invitations, together with a gift of money, were sent to chiefs who were asked to bring their doctors to the ceremony. The shamans themselves were paid by the audience. Each person present at the contest contributed a little shell money, the equivalent of ten to twenty-five cents. This money was collected by the shamans' winatums, and the total was divided among the shamans, the singers who accompanied their performance, and the shamans' winatums.

Often a chief was asked to bring an especially talented doctor or dancer to give a performance for the specific purpose of making money. From the audience's point of view the spectacle was an entertainment which they gladly paid to see. The following account of the Huhuna dancer gives us an example of this method of making money:[36]

The Waksachi (WM) did not have a Huhuna dancer among their own people. There was one from the Wukchumni (Y) and one from Tule River reservation that came up to Waksachi villages with their chiefs. They came to the Michahai (Y), too. Their names are not remembered. They came to fandangos at Tucso (the central village of the Michahai with a heavy admixture of Waksachi). They made money for Pao'ite, the chief, but they were paid for doing it.

Huhuna could hear money. Before the dance began the chief had money hidden. He put up the most but anybody that wanted to could put up a little money for this. It was hidden in the ground, under a shrub, or up in the rafters of the shades around the dance space. Huhuna was brought in. Sometimes he wore a mask that covered his eyes. He danced around. As soon as he heard the hidden money he pointed to it with a stick he carried. He had his own winatum who dug it out for him and put it in a basket.[37] After the money was all found Huhuna continued his dancing in order to make money for Pao'ite. In the meantime Pao'ite had sent his own winatum for a doctor who was to kill Huhuna with magic. He paid the doctor three or four dollars to do this. The

[36] From Sam Osborn; see Appendix. The Huhuna dance was part of the mourning ritual series, but might be performed outside of its ceremonial context at any time.

[37] This winatum might be loaned by the local chief or might be brought along with the chief and Huhuna.

10: Beals & Hester E-4, 5 (no date) 1958
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their neighbors raised their sleeping places on a low frame of willow poles.[10]

The settlements to the west apparently suffered from lack of water and during the summer and fall dry season residents in those villages commonly moved to the vicinity of the lake. Gayton says: "On the west side was a comparatively barren area, almost treeless and waterless, practically uninhabited, used little save for rabbit drives..."[11] In contrast, the residents of permanent villages on the lake frequently left during the summer to gather seeds and to hunt. Apparently they usually went eastward, if they traveled any distance, and in part collected on lands used by some of their eastern neighbors.

The economy of the Tachi was dominated by the resources of the lake and its tributary sloughs. The tule provided essential materials for house construction and for the making of balsas which were essential for the exploitation of many of the lake resources and were used extensively in transportation as far away as the east side of the San Joaquin Valley. Tule roots and seeds provided a major part of the vegetable food, and the *Tular* harbored small animals and the tule elk. The major subsidiary vegetable foods apparently were the bulbs of the brodiaea, easily obtainable in quantity in sandy spots, and grass seeds. In part, the latter were obtained from marked plots owned by particular women and inherited by their daughters, a sister, or other female sociological relative. Acorns are rarely mentioned and when obtained were apparently either secured by visits to the territory of other groups or were obtained in trade. The Choinimni to the east are especially mentioned as floating down the Kings Rivers on balsas to exploit the lake resources and to bring acorns and other materials in trade.

The river mussel (*Anodonta nuttaliana* Lea) probably was the most important source of animal protein. Other less abundant mollusks were utilized and fish were fairly important in the diet. The terrapin (*Clemmys marmorato*) and waterfowl were important resources.

In contrast land mammals apparently were not abundant. The largest, the tule elk, was snared or speared in the tule swamps but apparently seldom was attacked on dry land. During most of the year, the area offered little food for grazing animals such as the antelope. Even rabbits seem not to have been abundant, for the Tachi apparently

[10] GAYTON, 1948, p. 13.
[11] GAYTON, 1948, p. 6.

10: Beals & Hester E-4, 5 (no date) 1958
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did not secure enough rabbit skins for their own needs, securing additional skins in trade from the east.

These conclusions are supported by data from the only large archeological excavation in the near vicinity, on Buena Vista lake to the south, with very similar environmental conditions. Wedel reports that at one site in 3700 cubic yards excavated only 1053 animal bones were recovered. Of these, 411 were bird bones and 142 terrapin bones. Elk and antelope numbered 61 and 45 respectively. Two hundred and one rabbit bones were found, most of them jack-rabbits (*Lepus*). In contrast to the small number of elk and antelope bones, bones from the genus *Canis* (probably mostly domestic dogs, but including some coyote) numbered 127.[12]

The Tachi, to some extent, were middlemen in the trade of sea shells from the ocean to the interior and are reported to have done some processing of ocean shells secured in trade from neighbors to the west. Considering their environment, the Tachi apparently were dependent upon their neighbors, especially those to the east, for the following items: obsidian, steatite, stone mortars, oak mortars, pestles and sinew backed juniper bows. In addition, they traded for pottery, basketry, pigments, rabbitskins and rabbitskin blankets and acorns. In exchange they provided lake products including fish, tule mats, salt from salt grass and shell "money" they manufactured from shells secured in trade. That the lake resources were important is indicated by the fact that, although some Yokuts' neighbors were allowed to visit the lake themselves, trade with westerners was carried on at a distance from the lake apparently in part with the intention of preventing them from learning the techniques of securing the products.

The picture emerges clearly, then, of a desert-dwelling people who, paradoxically, were oriented toward a water-based economy. Without the lakes, marshes, and sloughs, the land would have supported only the scantiest population, and, in fact, large areas, especially to the west, were rarely visited. For the Tachi the acorn appears as a relatively unimportant luxury and not as a staple.

If we turn to non-material culture, the differences between the lake dwellers as exemplified by the Tachi, and the acorn using Yokuts to the east, largely disappear. In the existence of "tribes" sharing a common dialect and capable of common action, the existence of semi-

[12] WEDEL, p. 11. The remaining data on the Tachi and their neighbors are from Gayton, Kroeber and Latta.